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ABSTRACT

This document is designed to assist physical education teachers to design curricula which can help students with learning disabilities, emotional impairments, and educable mental impairments achieve Michigan's essential goals and objectives for physical education. Chapter I discusses legal mandates, terminology, movement characteristics of the target populations, role of physical education teachers, and recommended caseloads. Chapter II covers eligibility for special physical education, referral and evaluation processes, individualized educational planning, and placement decisions. Chapter III contains the individual objectives which students need to accomplish in order to reach the state goals. These goals address fundamental motor skills, cognitive abilities, body control, physical fitness, sport and leisure skills, and personal social skills. Under each objective, lead-up activities and suggested adaptations are listed, followed by areas in which a student may need developmental activities. Chapter IV covers developmental problems which may keep the student from achieving objectives. A definition of each problem, a list of movement characteristics, and types of helpful activities are given. Within each section, a set of activities are listed in developmental order with an explanation of how the activity benefits the student. Appendixes list 11 motor development assessments and names and addresses of almost 100 organizations. (Contains 17 references.) (JDD)

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IMPROVING PHYSICAL EDUCATION ACTIVITIES FOR STUDENTS WITH DISABILITIES

Michigan Department of Education
State Board of Education
July 1992

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IMPROVING PHYSICAL EDUCATION ACTIVITIES FOR STUDENTS WITH DISABILITIES

Michigan State Board of Education
July 1992

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Special thanks goes to the leaders and participants of the original Ad hoc Committee for the prodigious efforts they put forth in generating the original concepts for the document. Thanks also are given to Michigan Department of Education Consultant, Dr. Edgar Leon, who chaired the committee through numerous changes of direction which produced a more comprehensive and applicable document, and to Mr. Theodore Beck, Supervisor of Special Education Services of the Michigan Department of Education, for his support and assistance in making this document possible.

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This document was edited by Dr. Billye Cheatum and Dr. Allison Hammond from the Health, Physical Education and Recreation Department at Western Michigan University and Anna Glendenning, a teacher of students with emotional impairments in Lowell Public Schools.

FOREWORD

The following document is designed to assist physical education teachers to design curricula which can help students with learning, emotional, and mental impairments reach the essential goals and objectives of Michigan's Essential Goals and Objectives for Physical Education. The information in this document is intended for the instructional staff of higher functional students with disabilities. Physical education teachers in the State of Michigan are faced with the challenge of teaching classes in which up to 30% of the students will have some type of special need or impairment or exhibit characteristics which place them at risk. Many physical education teachers have not had training to modify teaching strategies to help these students move toward the goals and objectives established for the class.

As of May 1991, Special Education Services reported that, between the ages of 5 and 21, there are 72,149 students with learning disabilities, 12,643 students with emotional impairment, and 18,942 students with educable mental impairments attending public schools in the State of Michigan. These categories make up 65% of the 159,158 students between the ages of 5 and 21 receiving special education services in Michigan. These numbers do not include other students with seemingly minor impairments in physical education classes, such as students who are at risk, those with attention deficit disorders, or students who have coordination problems. These numbers do not include the number of students serviced in programs for Severely Mentally Impaired (SMI), Severely Multiply Impaired (SXI), Physically and Otherwise Health Impaired (POHI), Visually Impaired (VI) and Hearing Impaired (HI) who might benefit from physical education.

Legislation mandating physical education exists within the Michigan School Code. Part 21, 380.1502 states that health and physical education courses are to be established and provided for pupils in all public schools. Part 25, 380.1502 requires the Board of Education of a school district with more than 1000 students to employ qualified instructors and provide the location and equipment for instruction in health and physical education. The Michigan Department of Education has identified nine essential curriculum components that should be provided for all students in grades kindergarten through twelve. Physical education is one of the nine essential curriculum components.

The Physical Education Ad Hoc Committee developed a document, "Michigan Essential Goals and Objectives for Physical Education (K-12)" to provide programmatic support to local school districts. An objective of the document was to shift the emphasis in K-12 physical education programs from "instructional input or activities" to "student outcomes." Activities for each grade level were listed under six essential goals that were recommended for inclusion in physical education programs:

Fundamental Motor Skills	Effective Personal/Social Skills
Cognitive Skills	Physical Fitness
Body Control Skills	Leisure Sports and Activities

In 1971, Michigan became the first state in the United States to mandate equal and free public education opportunities for persons with disabilities through the age of 25. This included an equal opportunity in physical education specially designed, if necessary, to meet the needs of children with disabilities.

In 1989, the State of Michigan Special Education Services and Health Education Services appointed a committee to develop essential physical education goals and objectives for students receiving special education services. The goal of the Ad Hoc Committee on Essential Goals and Objectives for Students with Disabilities was to correlate the document with the regular physical education Ad Hoc Committee document as much as possible. While the objectives established by the Ad Hoc committee are also appropriate for students with learning disabilities, emotional impairment, and mental impairment, the regular physical education teacher must modify his/her program to accommodate the specific needs of these students. The committee was in agreement that some special materials and presentation of information had to be tailored to meet the unique physical education needs of students requiring special education services.

In response to Public Act 25, the Michigan State Board of Education approved the Model Core Curriculum: Student Outcomes, in October 1991. The core curricula refers to "outcomes" instead of objectives or goals. In order for goals and objectives in special physical education to parallel the Ad Hoc Committee document, "Michigan Essential Goals and Objectives for Physical Education (K-12)," the outcomes will be presented as goals and objectives.

This document addresses specifically the needs of students who are learning disabled (LD), emotionally impaired (EI), and educable mentally impaired (EMI). These students make up the majority of students eligible for special physical education.

Physical education teachers may have specific skills, activities, sports, or programs they feel are needed by children in classes. Some of these may also be included in group or individualized programs. However, when designing a developmental physical education program, it is important to examine what the activity demands the child do in order to perform the desired skill or activity. Seaman and DePauw believe that one should look at what the activity demands from the child in the motor, sensory, and sensory motor areas. For example, if the skill is hitting a tee ball, the developmental activity program should be designed around the following tasks or sensory needs:

Hitting a Tee Ball

Motor Skills:
- Striking Ball
  - Preparation
  - Strike
  - Follow through
- Holding Bat
- Standing Position

Sensory Systems (Which of the following sensory systems are used in each of the motor skills?):
- Visual
- Proprioceptive
- Vestibular
- Tactile
- Auditory

Motor-Sensory Demands (How the sensory systems are used during performance of the skill?):
- Static and dynamic balance - vestibular, proprioceptive and visual systems
- Position at plate - proprioceptive and vestibular system
- Holding bat - proprioceptive and tactile systems
- Looking at ball - visual system, vestibular
- Eye hand coordination during striking - visual, proprioceptive, vestibular and tactile systems
- Observing ball after hitting - vestibular - visual systems
- Follow through - vestibular, proprioceptive, visual and tactile

The book, Improving Physical Education Activities for Students with Disabilities, for students with LD, EI and EMI, contains four chapters and appendices. Chapter I discusses the legal mandates, terminology, movement characteristics of the target populations, role of physical education teachers, and recommended caseloads.

Chapter II covers the eligibility for special physical education, referral and evaluation processes, Individualized Educational Planning Committee (IEPC), and placement decisions.

Chapter III contains the individual objectives which students need to accomplish in order to reach the six essential goals. Under each objective, lead up activities and suggested adaptations are listed, followed by areas in which a student may need developmental activities.

Chapter IV covers developmental problems which may keep the student from achieving objectives. A definition of each problem, a list of movement characteristics, and types of helpful activities are given. Within each section, a set of example activities are listed in developmental order with an explanation of how the activity benefits the student.

The appendices contain a list of suggested motor development assessments, resources for further information, and organizations that provide services for the target populations.

CHAPTER 1

INTRODUCTION

Legal Mandates for Physical Education

Within the State of Michigan, both national and state legislative mandates require physical education services for all children with disabilities. In 1971, Public Act 198 (Michigan's Mandatory Special Education Act) established the right of persons with disabilities, through the age of 25, to a free public education. This included the right of every child with a disability to participate in physical education activities. If necessary, the program must be specially designed to meet the needs of the child.

The first national law to be enacted that provided for physical education programs for children with disabilities was Public Law 94-142, Education for All Handicapped Children Act. Physical education was included as a part of the definition of special education. Public Law 94-142 stated that the term "physical education" includes special physical education, adapted physical education, movement education, and motor development. It defined physical education as the development of:

1. Physical and motor fitness,
2. Fundamental motor skills and patterns, and
3. Skills in aquatics, dance, individual and group games and sports.

This is also the basis of the Michigan Board of Education definition of physical education published in the Revised Administrative Rules for Special Education (1991).

Public Law 93-112, Section 504 of the Rehabilitation Act prohibits discrimination of children with disabilities in physical education and athletics. Any public school that offers physical education courses, or intercollegiate, club, or intramural athletics may not discriminate against a child on the basis of a disability. The school or agency must provide an equal opportunity for participation in physical education or athletics for a qualified child with a disability.

Definition of Terms

The term Special Physical Education is an umbrella term promoted by Fait and Dunn (1989) which "consists of programs designed to enhance the physical and motor fitness of persons with disabilities through modified and developmentally sequenced sport, game, and movement experiences individualized for each participant" (p. 4). Adapted Physical Education is the "modification of traditional

physical activities to enable persons with disabilities to participate safely, successfully, and with satisfaction." (Auxter and Pyfer, 1989, p. 6)

Specific skills are skills that the "Michigan Essential Goals and Objectives for Physical Education (K-12)" recommends introducing at each grade level.

Developmental activities are activities that are directed toward the maturational (neurological) level of the child. They are designed to help students gain underlying readiness skills necessary to accomplish the essential goals and objectives. When a child cannot perform a specific skill, it is often beneficial to reduce the activities to the developmental level of the student. This enables the student to have a better base of movement on which to later accomplish more complicated skills. Repetitive drills of specific skills, not at the developmental level of the child, tend to promote splinter skills which do not transfer from one game, skill, or sport to another

Target Populations

Michigan currently recognizes thirteen categories of handicapping conditions. This document is directed toward the large number of students who are usually "mainstreamed" into regular physical education classes in the state of Michigan. This includes students who have learning disabilities, educable mental impairments, and/or emotional impairments. These three categories represented 38% of the students with disabilities in 1988-89. When the speech and language category is also included, the percentage increases to 63%. Students in each of these categories often demonstrate problems in movement.

Goals and Objectives of Special Physical Education Outcomes Project

The Special Physical Education Outcomes Project is centered around objectives developed for each of the following six essential goals:

1. Fundamental motor skills
2. Body control/posture skills
3. Physical fitness
4. Sports and game skills
5. Cognitive skills
6. Personal/social skills

At each grade level the goals are given different emphases depending upon the ages and ability levels of the students. Focus of instruction for younger students is on body control and fundamental motor skills. For older students, there is a greater emphasis on physical fitness and sports and games skills. Cognitive and personal/social skills are addressed throughout the kindergarten through twelfth grade programs.

Anticipated Student Benefits

The three potential benefits of special physical education programs for the target populations are psychomotor, cognitive, and personal/social outcomes. Psychomotor benefits range from fundamental motor skills to fitness, recreation, and sport skills. Cognitively, students gain knowledge about the best way to move, ways to improve physical fitness, ways to avoid injury, and rules of games and sports.

Personal/social benefits include following directions, self-concepts, cooperation, coping with success and failure, making friends, and ethics of games and sports. Early studies on the social benefits of mainstreaming indicated that, in some cases, students were adversely affected. However, Auxter and Pyfer (1989) state that "when conditions of participation are well controlled (e.g., appropriate activities are offered at the ability level of the learner) and environments are designed that include a carefully structured modeling process, social development can be fostered through physical activity." (p. 7)

Local and Intermediate School Districts

In Michigan, there are two types of school districts: a) Local Education Agencies (LEA), and b) Intermediate School Districts (ISD). There are over 550 LEA's which provide educational services and programs for both regular education students and students with disabilities.

Michigan is also divided into fifty seven ISD's which coordinate special education programs and services for students with disabilities in both the LEA's and the ISD's. In general, the students who are more severely disabled and whose conditions prevent them from attending their local school of residence, may attend a center based program often run by the ISD.

Physical Education Teachers

In the State of Michigan there are "regular" physical education teachers and those who have an approval as a teacher of physical education for individuals with disabilities. A regular physical education teacher receives certification by the Michigan Department of Education and provides instruction to regular students and students with disabilities who are enrolled in LEA's.

In 1981, the Michigan Revised Administrative Rules for Special Education (1991), for the first time, included an Approval as a Teacher of Physical Education for Handicapped Individuals. Applicants must have a valid Michigan teaching credential in either physical education or special education. In addition, applicants must complete required coursework and practica that meet specific teaching competencies in special education and special physical education. Teachers of Physical Education for Individuals with Handicaps may teach

physical education to both regular and special students. They may also serve as consultants to regular physical education teachers or they may provide direct instruction to students with disabilities in both an LEA or an ISD.

Both State and Federal laws state that physical education programs specially designed, if necessary, must be provided for children who have special needs as determined by an Individualized Educational Planning Committee (IEPC). Fully approved teachers of physical education for individuals with disabilities are likely to be more competent to meet the unique needs of children with disabilities. Public schools are not required to employ teachers with the Teacher of Physical Education for Handicapped Individuals approval; however, it is recommended that public schools employ special education teachers who have the training to implement a specially designed physical education program. Local and intermediate school districts receive state aid reimbursement when a fully approved special education teacher is employed.

Recommended Caseload

Caseload is a term used by Special Education Services to indicate the number of students for whom a teacher is responsible. The Revised Administrative Rules for Special Education (1991) limit the number of students with disabilities in a special education classroom at one time to 10-15. Teachers are also limited to educational programming for not more than 15-60 different students.

In the State of Michigan, there is no caseload requirement for physical education classes. In many schools, more than one class of students with disabilities has been scheduled for physical education services at the same time. It is recommended that teachers of physical education for the handicapped caseloads be based on the following:

1. Needs of students
2. Number of schools assigned to the special education physical education teacher
3. Availability and number of aides
4. Teacher assistance
5. Range of handicapping conditions in class
6. Number of school staff to be consulted
7. Number of new referrals
8. Class setting: Segregated or Integrated

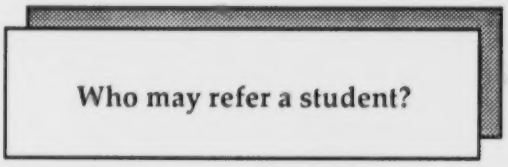
CHAPTER 2

ELIGIBILITY FOR SPECIAL PHYSICAL EDUCATION AND PLACEMENT DECISIONS

In order for students to be eligible for special education programs and services, including special physical education, the student must be: a) suspected of having a handicapping condition and referred to the school district, b) evaluated by special education staff as specified by Special Education Administrative Rules; c) determined to be eligible for special education services and/or programs by the Individualized Educational Planning Committee; and d) placed in the least restrictive environment relative to education programs and services. Since physical education is mandated in both state and federal law, the role of the physical education teacher of individuals with disabilities is very important. Physical education teachers can provide valuable information when determining eligibility for special physical education, such as directly participating in setting goals and objectives and deciding placement during the IEPC process.

Referral

Referral occurs whenever notification of a person suspected of having a disability or notification that a person may need a change in educational status is received. The Director of Special Education and/or Building Principal at either a local school or an intermediate school can receive referrals made by classroom teachers, regular physical education teachers, social workers, parents, licensed physicians, registered nurses, representatives for other agencies, or others. Referrals may also be made by the physical education teacher. (See Figure 2.1)

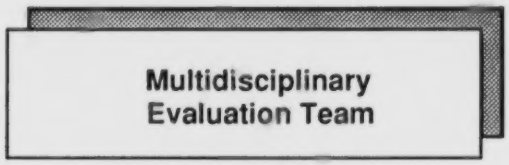


Classroom Teacher
Physical Education Teacher
Social Worker
Parent
Licensed Physician
Registered Nurse
Representative of Other Agencies
Others

Figure 2.1

Evaluation

After the public agency has received the referral, the agency must request permission from the parents to evaluate the student suspected of having a disability. The education agency has 30 days after receiving written consent from the parent or guardian to complete the evaluation and hold an Individualized Educational Planning Committee (IEPC) Meeting. The evaluation must be done by a Multidisciplinary Evaluation Team (MET). The MET team has at least two members: (See Figure 2.2) one must be a special education teacher or other specialist with knowledge in the area of the suspected disability, and the other member may be any other qualified professional in areas related to the suspected disability. The agency is required to review the educational program of the student annually and to complete a reevaluation every three years.



Special Education Teacher
Specialist in Area of Disability
Any Qualified Personnel in Area of Disability
Classroom Teacher
Special Physical Education Teacher
Parent Input

Figure 2.2

When a referral indicates motor inadequacy, including lack of muscle tone or poor physical condition, the physical education teacher should become part of the MET team. Specific capabilities which an approved teacher of physical education for individuals with disabilities is uniquely qualified to assess are: a) supportive functions to movement, b) fitness level, c) developmental motor level, d) sensory motor development, and e) perceptual motor level of the student related to cognitive development. (See Figure 2.3)

Physical Education Evaluation Areas

Supportive Functions to Movement
Fitness Levels
Developmental Motor Level
Perceptual Motor Level
Sensory Motor Development

Figure 2.3

Special physical education assessments are based on: a) formal tests, b) informal tests, c) direct observations, and d) interviews. Formal tests have been standardized and allow comparisons of students with the same chronological age and/or disability. Informal tests indicate the performance level of the students measured against various criteria or objectives. Direct observation and interviews are equally important because parents and other faculty provide input about the functional level of students. Information gathered from the assessments is included in the MET report which is used during the Individualized Educational Planning Committee (IEPC) meeting to determine eligibility.

IEPC Process

The role of the IEPC is to determine eligibility, write the Individualized Education Plan (IEP) and decide where the student will be placed based on the least restrictive educational setting. Persons serving on the IEPC are appointed and invited by the superintendent. Parent(s) must be invited to the IEPC meeting. If the parent(s) or a representative of the parent(s) does not attend, the meeting must be held and a report of the meeting sent to the parent(s) for approval or disapproval. If the parent(s) disagrees with the IEP, a due process hearing may be requested.

The IEP determines the special education services and programs, as well as physical education needs of the student. The physical education teacher of individuals with disabilities should be a member of the IEPC, especially if the MET report indicates a need for special physical education. In the majority of cases, the IEPC recommends that a student with disabilities receive regular physical education and indicates on the IEP that special physical education is not needed.

In some situations, particularly at the secondary level, yearly assignment to continuous physical education is not appropriate. When a school district only requires one credit in physical education during three years of junior or senior high, additional physical education is not necessary if the student has achieved grade level motor and sport development. The IEPC indicates that physical education was considered but was not appropriate because the graduation requirement was fulfilled. In the same case, if additional physical education would benefit the special education student, the IEPC should indicate special physical education on the IEP or state why continued participation in regular physical education would meet the physical education needs of the student.

Developing Goals and Short Term Objectives for the IEP

Besides the responsibility of determining eligibility for special education, the IEPC process includes developing the Individualized Education Program (IEP). The IEP should be written so that parents and each person who works with the student knows the current level of cognitive, affective, and psychomotor performance. The information is necessary in order to develop annual goals and short term performance objectives. Each physical education annual goal should include a series of short term objectives which describe the skills to be learned by the student during the school year and criteria which indicates that learning has occurred. Each annual goal should have at least two short term instructional objectives. Daily lesson plans include 2 or 3 instructional activities that lead toward the short term objectives. Instructional objectives also include criteria to indicate when the instructional objectives have been met.

Least Restrictive Environment

The last responsibility of the IEPC is to determine the educational setting in which the special education programs will occur. According to federal and state law, education must occur in the most normal environment in which the educational programs can be appropriately implemented or the Least Restrictive Environment (LRE). The consideration for placement is determined by the Michigan 13 step process discussed in the 1984 position statement, "The Education Assignment of Handicapped Children and Youth to Separate Facilities". The basic tenets include a) flexibility and reevaluation, b) possibility of participating in normal school activities with peers, and c) individualized programs for students to learn skills which allow participation with peers. The most restrictive environment is full time in a specialized facility, and the least is in a regular class with regular students. Within the LRE continuum (See Figure 2.4), the majority of students can be served in regular classrooms, while some students need to be served in a separate residential facility.

Least Restrictive
Full time regular classroom
Regular classroom with supplemental instruction
Regular classroom part time/
special classroom in regular school part time
Special classroom in regular school
Full time in special school
Most Restrictive
Special residential facility

Figure 2.4 Continuum of Least Restrictive Environment

Exit Special Physical Education

If all IEPC members agree to the decisions at the IEPC meeting, programs and services will begin for the student within 15 days after notification of the parents. Either the parent(s) or the public agency can disagree with the decisions of the IEPC. The family or public agency is entitled to due process hearings. Special education programs and services will not be initiated until the results of due process are received.

A student who is provided with special education programs and services must have an IEP. Physical education options should be considered. The need for special physical education may or may not be warranted; therefore, the delivery of physical education services for the student may remain the same, be changed, or terminated.

CHAPTER 3

ESSENTIAL GOALS AND OBJECTIVES

Student Objectives Leading Toward the Six Essential Goals

The essential goals and objectives for special physical education included in this chapter are based on the six broad goals of general physical education which were determined to be the basis of sound physical education by teachers in the State of Michigan.

The essential goals for physical education are:

Fundamental motor
Cognitive
Physical fitness
Body control
Sports and leisure skills
Effective personal social

Special physical education teachers should help students with disabilities meet the same goals. The objectives are basic so that students with learning disabilities, emotional impairments, or educable mental impairments can meet many of the goals and objectives. However, many programs need to be designed to begin at the developmental level of the student.

The essential goals are interrelated and one may be emphasized above the others, depending upon the development and the individual needs of students. Short term objectives within each goal are suggested as the means to work toward the essential goals. The physical education teacher can use the objectives as guidelines to measure abilities which the students should gain through special physical education.

Following each objective are suggested lead up activities and adaptations which will allow students to work at their own level of development. Physical education teachers can use the ideas to develop individual objectives for a student who cannot meet an objective as it is stated.

In some instances, students may need instruction in basic sensory motor integration techniques before specific objective can be met. Therefore, at the end of each objective, reference is made to the particular sensory system(s) involved in accomplishing the objective. The physical education teacher is then referred to a page number in Chapter 4 which includes descriptions for specific sensory motor development. The suggested activities in Chapter 4 are designed in developmental sequence in order to decrease the sensory motor problem of the student and eventually enable the student to reach the short term objectives.

Example Uses of Special Educational Goals and Objectives

For Example:

A student is having trouble meeting Objective 3 of Goal 3: Dynamic Balance. The teacher can use the suggested lead-up activities. If the lead-up activities do not help the student meet the objective, the teacher can refer to the related sensory motor section listed in Chapter 4. For example, the teacher may refer to the Section for Vestibular Integration in Chapter 4 to find activities which improve the underlying vestibular problem preventing dynamic balance from developing. (See Figure 3)

Schematic Diagram of the Use of the Sensory Integration Section in Relationship to the Essential Goals and Objectives

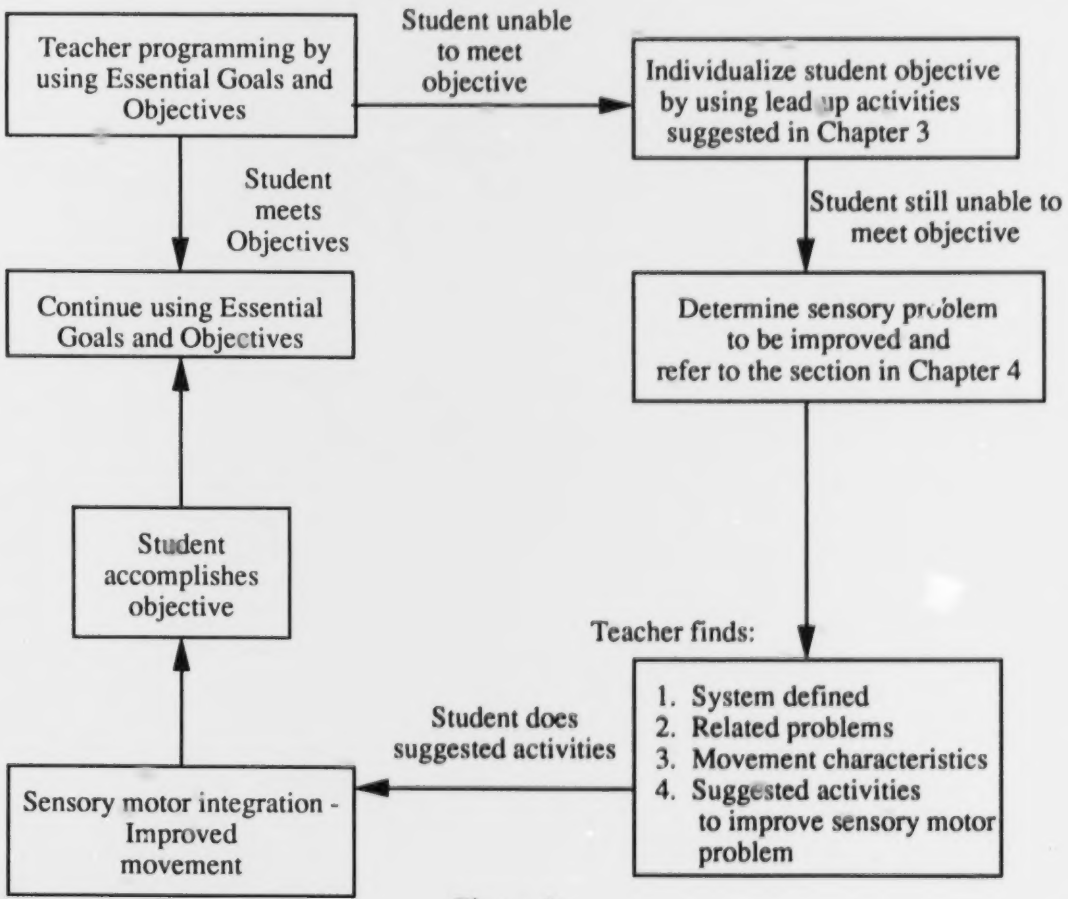

Teacher programming by using Essential Goals and Objectives
Student unable to meet objective
Individualize student objective by using lead up activities suggested in Chapter 3
Student meets Objectives
Student still unable to meet objective
Continue using Essential Goals and Objectives
Determine sensory problem to be improved and refer to the section in Chapter 4
Student accomplishes objective
Teacher finds:
1. System defined
2. Related problems
3. Movement characteristics
4. Suggested activities to improve sensory motor problem
Student does suggested activities
Sensory motor integration - Improved movement

Figure 3

FORMAT: ESSENTIAL GOALS AND OBJECTIVES

A comprehensive special physical education program rests on the assumption that enough instructional time at appropriate levels of instruction will be provided to cover the six goal areas.

The following three stages of learning are used by the state to guide the level of instruction at all levels for each grade: These are:

Levels of Instruction
I = Introduce
D = Develop
R = Reinforce

The Introductory is the initial formal contact of a student with one or more of the objectives. At this stage, simple instructional objectives (daily lesson plans) are provided which serve as the foundation for more complex levels (develop and reinforce).

During the Developmental stage of the instructional objectives, formal instruction is more intense. Students are involved in learning experiences which will enable them to acquire specific types of knowledge, understanding and proficiency in skills. The focus of instruction is on helping students to understand and comprehend concepts appropriate for their developmental level.

The Reinforcement level is the stage of learning where instruction is provided which will enable students to expand upon concepts or skills they acquired at an earlier level. Opportunities are made available for students to apply what they have learned. The 13 grade levels of instruction are grouped into the following four grade level categories:

Grade Placement Groups
K - 3
4 - 6
7 - 9
10 - 12

The following section includes the Essential Goals and Objectives for Special Physical Education K - 12 with the stages of learning recommended for each grade level. It should be noted that this is only a guide and that these stages of learning may vary depending on the students' level of development, student teacher ratio and the time available for instruction at each level.

ESSENTIAL GOALS AND STUDENT DEVELOPMENT: SHORT TERM OBJECTIVES FOR SPECIAL PHYSICAL EDUCATION K-12

GOAL 1: DEMONSTRATE COMPETENCE ON SELECTED FUNDAMENTAL MOTOR SKILLS

Short Term Objective 1:	K/3	4/6	7/9	10/12
Demonstrate competence in running.	ID	R	-	-

Instructional Objective A:

Demonstrate the following elements of form while running at a fast speed.

a. Focus the eyes on a point on the surface but at least 30 feet in front of the body and maintain minimal head motion.
b. Follow an imaginary line four inch wide envisioned as the path of the run.
c. Lean the trunk forward at least 10 degrees.
d. Push off with the toes of the supporting leg.
e. Flex the knee of swing leg at least 90 degrees during its recovery.
f. Obtain a period of non-support between the time when the feet contact the surface.
g. Contact the surface with a heel-toe sequence.
h. Move the arms in opposition to the legs with the elbows flexed 90 degrees (plus or minus 10 degrees).
i. Bend the elbows 90 degrees (plus or minus 10 degrees) with the hands near shoulder height on the foreswing.
j. Swing the arms forcefully forward and upward without crossing the midline of the body.

Instructional Objective B:

Maintain all of the elements of appropriate form and run 40 yards two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance
(Walk with a bean bag on top of the head on a balance beam.)
Proprioceptive (page 80)
cross lateral pattern
(Walk with eyes focused ahead without wobbling. Practice walking criss cross over a line on the floor with arms swinging in opposition.)
Primitive Reflexes (page 93)
Tonic muscle tone
(Demonstrate correct walking posture.)

Suggested Adaptations:

Run through a path that is 12 inches wide.

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 2:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the horizontal jump	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while jumping horizontally.

a. Focus eyes on target.
b. Flex the hips and knees at 80 to 100 degrees in preparation for the jump, simultaneously swinging the arms to a position behind the body.
c. Take off with both feet simultaneously.
d. Forcefully extend the ankles, knees, and hips in unison with arm extension so that the take-off angle (ankles, hips, shoulders, arms) is near 45 degrees (plus or minus five degrees).
e. Forcefully thrust the arms forward and upward to a position of complete extension in alignment with the trunk.
f. Land with the feet well ahead of the center of gravity, knees flexed to absorb the impact of landing.
g. Thrust the arms forward upon landing to help keep the momentum moving forward to maintain balance.

Instructional Objective B:

Coordinate the elements of form into a smooth horizontal jumping motion.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance
(Run with quick direction changes.)
Proprioceptive (page 80)
awareness of body positions during take-off and landing
bilateral coordination of legs
Primitive Reflexes (page 93)
overcoming the force of gravity
(Practice small vertical jumps. Practice muscle strength of lower leg.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 3:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in vertical jumping	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form in the vertical jump.

a. Tilt the head up and focus on the target.
b. Place the feet shoulder width apart, weight slightly forward.
c. Extend the arms behind the body, with elbows extended at least 135 degrees.
d. Flex the hips and knees (80 to 100 degrees) in preparation for force production.
e. Swing the arms forcefully forward and upward while forcefully extending ankles, knees, and hips.
f. Reach directly overhead by extending the elbow and shoulder joint until the legs, trunk, and the reaching arm are in vertical alignment.
g. Contact the surface by landing on both feet simultaneously on or near the take-off spot.
h. Absorb the force of landing by flexing the ankles, knees, and hips.

Instructional Objective B:

Coordinate the elements of form into a smooth, coordinated jumping motion at least 12 inches beyond maximum vertical reaching height two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance
(Run with quick direction changes.)
Proprioceptive (page 80)
bilateral control
(Control body during take-off and landing. Jump over a balance beam holding bean bag between the feet.)
Primitive reflexes (page 93)
overcoming force of gravity
(Jump in a 2 ft by 2 ft square or a 1 foot square.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 4:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in hopping	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while hopping on the dominant foot.

a. Flex the non-support leg and move thigh upward.
b. Push off by flexing and extending the knee and ankle of the supporting leg.
c. Land on supporting leg, flexing knee and ankle to absorb force and to prepare for the next hop.
d. Flex elbows and arms and move arms in coordination with legs to provide lift and balance.

Instructional Objective B:

Coordinate the elements of appropriate hopping form and:

a. Hop at least five times on non-dominant foot.
b. Hop at least five consecutive times at a moderate tempo, in time with an even beat, using both dominant and non-dominant leg.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance
muscle tone
(Practice running with quick direction changes. Balance on one foot while blindfolded.)
Proprioceptive (page 80)
know where body is in space
unilateral coordination of legs
(Hop in one place to control the body.)
Primitive Reflexes (page 93)
overcoming force of gravity
(Strengthen muscles in legs.)

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Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 5:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in skipping	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form and rhythm while skipping at a moderate speed, for eight consecutive skips.

a. Step forward with the lead foot and then hop with the same foot.
b. Alternate legs by moving opposite leg forward and hop on that foot.
c. Obtain a period of non-support during the hop phase.
d. Move the arms in opposition to the legs with the elbows bent approximately 90 degrees.
e. Maintain a 2:1 uneven rhythmical pattern (two units of time on the step and one unit of time on the hop) at a moderate speed.

Instructional Objective B:

Coordinate the elements of form in a smooth rhythmical motion for at least eight consecutive skips.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- muscle tone
  - (Stand on one foot or hop on one foot.)

Proprioceptive (page 80)
- cross lateral pattern
- control body movements
  - (Walk criss cross over a line on the floor, swinging the arms in opposition. Move through skipping pattern slowly.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 6:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in sliding	**ID**	**R**	-	-

Instructional Objective A:

Demonstrate the following elements of form and rhythm while sliding with a right and left foot lead. (Reverse for a left foot lead.)

a. Align right hip and shoulder, to the right.
b. Position the arms in front of the body and at waist height for balance.
c. Maintain most of the body weight on the balls of the feet.
d. Step sideways to the right (shoulder width) follow with a drag step of the left foot to a point at or near the contact point of the right foot.
e. Obtain a short period of non-support while moving the left foot.
f. Maintain a 2:1 rhythmic pattern at a moderate tempo (two units of time on the lead foot to one unit of time on the trailing foot).

Instructional Objective B:

Coordinate the elements of form in a smooth, rhythmical sliding pattern.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance
muscle tone
(Balance on a tilt board.)
Proprioceptive (page 80)
knowledge of where body is in space
unilateral coordination for sideways motion
(Do jumping jacks, lifting legs and arms on one side of the body. Practice slide movement slowly.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 7:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in galloping	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form and rhythm while galloping with a right foot lead and then with a left lead foot.

a. Move arms in opposition to legs with elbows bent at 90 degree angle.
b. Step forward with the lead foot, followed by a step with the trailing foot, to a point at or near the original contact point of the lead foot.
c. Maintain a 2:1 rhythmic pattern at a moderate tempo (two units of time on the lead foot and one unit of time on the trail foot).
d. Maintain a period of non-support while the weight is shifted from the lead to the trailing foot.

Instructional Objective B:

Coordinate the elements of form in a smooth rhythmical galloping pattern for five gallops.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration
- deceleration
  - (Balance on one foot while blindfolded. Balance on a tilt board.)

Proprioceptive (page 80)
- control of body movement
- unilateral coordination heading continuously with one foot
  - (Running with proper form and to various rhythms. Galloping with make believe stick horses.)

Primitive Reflexes (page 93)
- overcoming gravity
  - (Walking with proper form and to various rhythms.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 8:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in leaping	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while leaping.

a. Focus the eyes on the take-off spot.
b. Approach the take-off point with a moderate run. (See objective 1.)
c. Place the take-off foot on the take-off spot by shortening the last stride.
d. Swing the non-support leg vertically and horizontally forward by flexing the thigh toward the trunk, extending the knee fully and flexing the ankle.
e. Extend the trailing leg to as nearly a horizontal position as possible.
f. Thrust the arms to the horizontal position in opposition to the action of the legs.
g. Hold the trunk in a vertical position during the in-flight phase.
h. Land on the leading foot with heel-toe contact and knee flexion.

Instructional Objective B:

Coordinate the elements of form in a smooth leaping motion two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration
- deceleration
  - (Practice running with quick stop/start movements.)

Proprioceptive (page 80)
- cross lateral pattern
- control body movements
  - (Visually model and walk through the skill. Practice walking.)

Primitive Reflexes (page 93)
- overcome force of gravity
  - (Strengthen leg muscles through jumping.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 9:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the underhand roll	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while rolling a three to five inch ball with an underhand pattern, two consecutive times.

a. Focus eyes on the target.
b. Place the hips and shoulders parallel to the target to initiate the roll.
c. Hold the ball in the hand with the palm up and fingers pointing toward the target.
d. Move the foot opposite the throwing arm forward as the throwing arm moves backward to a point at least 30 degrees beyond the trunk.
e. Flex both the knees and the hips during the forward movement.
f. Swing the arm forcefully forward just prior to the time that the striding foot strikes the surface.
g. Release the ball within six inches of the floor, as the hand passes the hips.
h. Follow through well beyond the point of release and in direct alignment with the target.

Instructional Objective B:

Maintain all the elements of an appropriate underhand rolling pattern and hit a three feet wide target, placed forty feet away, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
  - (Practice smooth movements while balancing on one foot then the other.)

Proprioceptive (page 80)
- cross lateral pattern
- body position in relationship to target
  - (Roll ball from various distances at various speeds. Practice twisting upper body against lower body during follow through.)

Tactile (page 83)
- pressure of grip on ball
  - (Practice rolling balls of varying textures and sizes.)

Vision (page 87)
- fixating on target
- perception of distance from target
  - (Practice focusing the eyes on the target for progressively more time.)

Suggested Adaptations:

Use balls with different textures.
Use a larger target.
Stand closer to the target.

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 10:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence				
in the underhand throw	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of an underhand throw while projecting a three to five inch ball a distance of twenty feet, two consecutive times.

a. Focus the eyes on the target.
b. Place the feet together with the shoulders perpendicular to the target.
c. Transfer the weight to the foot on the same side as the throwing arm while the throwing arm swings backward to a point at least 45 degrees beyond the position of the trunk.
d. Step directly toward the target with the foot opposite the throwing arm.
e. Swing the throwing arm forcefully forward just prior to the time that the striding foot contacts the surface.
f. Follow through well beyond the point of release and in alignment with the target.

Instructional Objective B:

Coordinate all the elements of an underhand throw in a smooth throwing pattern. Hit a four foot square target placed above the ground, from a distance of 30 feet, two consecutive times.

Sensory Motor Skills:

Vestibular (page 77)
- dynamic balance
  - (Practice smooth movements while balancing on one foot then the other.)

Proprioceptive (page 80)
- aware of body in relation to ball and target
- cross lateral coordination
- control of grip on ball
  - (Practice twisting upper body against lower body during follow through.)

Tactile (page 83)
- sensation of ball in hand
  - (Practice throwing balls of different weights and materials: yarn ball, tennis ball, etc.)

Vision (page 87)
- fixation on a target
  - (Practice fixating on the target.)

Suggested Adaptations:

Use a yarn ball
Use a larger target
Stand closer to the target

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 11 :	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence				
in a two-handed chest pass	**ID**	**R**	**-**	**-**

Instruction Objective A:

Demonstrate the following elements of form, while projecting an eight to twelve inch ball with a chest pass, two consecutive times.

a. Place feet shoulder width apart with the weight on the balls of the feet.
b. Place hands on sides of the ball, fingers spread and pointing forward, thumbs toward the back of the ball, and palms in light contact with the ball.
c. Hold ball chest high with the elbows flexed seventy to ninety degrees.
d. Focus eyes on target.
e. Stride forward with the lead foot striking the floor just prior to the time that the ball is released.
f. Push ball toward target by extending elbows, while extending hands toward target with thumbs down, and release the ball.

Instructional Objective B:

Coordinate the elements of appropriate form, while throwing an eight to twelve inch ball at least twelve feet, hitting a square target placed four feet off of the floor, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- static and dynamic balance
- acceleration and deceleration of motion
  - (Practice walking on a straight line.)

Proprioceptive (page 80)
- body awareness in relationship to ball and target
- smooth control of body movement
- bilateral and cross lateral coordination
  - (Practice movement without ball, ending the movement with thumbspointed toward target. Practice other activities which require that both arms work at the same time.)

Tactile (page 83)
- pressure of grip on ball and when to release
  - (Practice gripping a yarn ball when it touches the hand, or practice releasing ball at different angles to observe flight.)

Vision (page 87)
- fixation on target
- perception of distance to target
- ocular motor tracking
  - (Practice fixating on an object.)

Suggested Activities:

Use a larger ball
Use a larger target

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 12:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the overhead pass	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form, while passing a 10 to 12 inch ball with an overhead motion, two consecutive times.

a. Place the feet shoulder width apart in a forward stride position with the weight on the balls of the feet.
b. Grip the ball with the fingers spread across the back and sides of the ball and the palms in light contact with the ball. (Form a 'W' with the thumbs and index fingers.)
c. Transfer the weight to the rear foot as the ball is moved above and behind the head.
d. Step forward with the lead foot and forcefully throw the ball by moving arms forward while extending elbows and wrists.

Instructional Objective B:

Coordinate the elements of form into a smooth overhead passing motion, passing a 10 to 12 inch ball at a four foot by four foot square target centered four feet off the ground, from a distance of 15 feet, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration and deceleration of motion
  - (Practice balancing on a tilt board.)

Proprioceptive (page 80)
- bilateral coordination of arms and hands
- cross lateral movement of legs
- control of body parts during movement
- control of ball with fingers, wrist and arms
  - (Practice movement without ball, ending the movement with finger tips pointed toward target. Practice activities which require that both arms work at the same time.)

Tactile (page 83)
- control of ball with finger and palm
  - (Practice gripping a yarn ball when it touches the hand.)

Vision (page 87)
- fixation
- ocular motor tracking
- practice fixating on an object
- practice shifting from one foot to the other

Suggested Adaptions:

Use a larger ball
Use a larger target
Stand closer to target

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 13:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the overhand throw	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while throwing a tennis ball at least 30 feet, two consecutive times.

a. Focus eyes on target.
b. Stand with the feet parallel, shoulder width apart, and grip the ball with two or three fingers in opposition to the thumb.
c. Bend the elbow and move the shoulder backward until the tennis ball is next to the ear.
d. Rotate the hips and shoulders parallel to the direction of the arm during the 'wind up' phase.
e. Extend arm, elbow, and wrist toward target while transferring weight and stepping forward onto opposite foot and unwind the hips and shoulders.
f. Release the ball and follow through with the arm and hand upward in the direction the ball is to travel.

Instructional Objective B:

Coordinate the elements of appropriate throwing form, and hit a six foot square target centered four feet above the ground from a distance of 40 feet, with a tennis ball, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance during weight shift
- acceleration/deceleration of motion
  - (Practice smooth movement while balancing on tilt board.)

Proprioceptive (page 80)
- cross lateral movement
- awareness of body and arm in relation to ball and other parts of the body
  - (Practice twisting upper body against lower body during follow through.)

Tactile (page 83)
- awareness of contact with ball
  - (Practice throwing balls with different textures.)

Vision (page 87)
- fixation on target
- ocular motor tracking of ball
  - (Practice fixating on the target. Throw the ball from various distances and releasing ball at various heights.)

Suggested Adaptations:

Use balls with various textures
Use a larger target
Stand closer to the target

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 14:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in catching rolling balls	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while catching a three to five inch ball rolled at a moderate speed from at least 30 inches directly to the student, two consecutive times.

a. Focus eyes on the rolling ball.
b. Position self in front of ball with feet shoulder width apart and weight on balls of feet.
c. Bend knees and hips, extending elbows and hands down so that the fingers can touch the ground.
d. Grip the ball and flex the elbows as ball touches hands to absorb the force of the ball.
e. Control the ball with the hands (vs. trapping against the body).

Instructional Objective B:

Coordinate the elements of appropriate form while catching a tennis ball, that is a ground ball at a moderate speed, from 30 to 40 feet to a point within five feet of the student's original position, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- static balance
- dynamic balance
  - (Walk on a low balance beam.)

Proprioceptive (page 80)
- know where body is in relationship to ball
- bilateral control of hands moving together
  - (Practice catching the ball rolled from various directions. Practice other activities which require that both arms work together.)

Tactile (page 83)
- grip ball on contact with hands
  - (Practice gripping a yarn ball when it touches the hand.)

Vision (page 87)
- ocular motor tracking
  - (Practice following a rolling ball with the eyes.)

Suggested Adaptations;

Use larger ball or balloon

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 15:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in catching fly balls	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of appropriate form while catching a four to six inch yarnball thrown at least 10 feet high from a distance of 30 feet directly to the student, two consecutive times.

a. Focus the eyes on the ball from the approach to contact.
b. Place feet shoulder width apart and distribute weight evenly on both feet.
c. Cup hands with fingers pointing up if ball is above the chest, and down if ball is below the chest.
d. Extend elbows to meet the ball.
e. Grip ball at moment of contact and flex elbows to absorb the force of ball.
f. Control the ball with the hands (vs. trapping against the body).

Instructional Objective B:

Coordinate the elements to catch a fly ball thrown at least 20 feet high from a distance of 40 feet to a point within 10 feet of the student, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- static balance
  - (Practice balancing on different body parts. i.e., make different balance shapes.)

Proprioceptive (page 80)
- ability to position body and limbs in relationship to the ball
  - (Practice activities which require that both arms work at the same time. Practice catching a ball from various distances.)

Tactile (page 83)
- awareness of ball contacting hand
- control pressure of grip on the ball
  - (Practice gripping a yarn ball whenever it touches the hand.)

Vision (page 87)
- ocular motor tracking
  - (Practice catching a rolling ball and ball throws from 5 - 10 feet.)

Suggested Adaptations:

Use larger ball or balloon

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 16:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in kicking	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while kicking an eight to ten inch ball a distance of 20 feet.

a. Focus eyes on the ball from the approach through contact with the ball.
b. Approach the ball with one or three steps to a point where the non-kicking foot is beside the ball, while extending trunk to a vertical position.
c. Arms move in opposition to legs.
d. Move the kicking leg forward, extend the knee rapidly at the time toes or instep contact ball just below the midpoint.
e. Follow through after foot contact by landing on kicking foot.

Instructional Objective B:

Kick an eight to ten inch ball 40 feet and hit a target 20 foot wide by eight foot high, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration and deceleration of motion
  - (Practice kicking with one foot and not letting the kicking foot touch the floor.)

Proprioceptive (page 80)
- coordination of body in relation to kicking leg
- cross lateral motion
  - (Practice kicking the ball varying the amount of force.)

Tactile (page 83)
- impact of ball on foot
  - (Walk barefoot over varying textures.)

Vision (page 87)
- fixation
- ocular motor tracking
  - (Practice kicking a balloon.)

Suggested Adaptations:

Use a larger ball

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 17:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in dribbling with the feet	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while dribbling a 10 to 12 inch ball with the feet, at a moderate speed.

a. Focus the eyes at least five inches in front of the feet, not on the ball.
b. Lightly contact the ball with inside, outside, and/or toe of left or right foot in alternating fashion, as appropriate.
c. Project the ball no more than six feet beyond the body.
d. Maintain a moderate to fast running speed while contacting the ball.
e. Use the arms and body to maintain control and balance.

Instructional Objective B:

Coordinate elements while dribbling a 10 to 12 inch ball through a series of six cones placed 15 feet apart in a straight line without losing control of the ball, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration/deceleration of motion
  - (Practice kicking with one foot and not letting the kicking foot touch the floor.)

Proprioceptive (page 80)
- ability to position body and feet in relationship to the ball
- cross lateral running and kicking patterns
  - (Practice kicking the ball with varying force.)

Tactile (page 83)
- control contact with the ball
- awareness of foot contacting the ball
  - (Roll the ball to the student while he/she is blindfolded and barefooted. Have the student kick on contact.)

Vision (page 87)
- Ocular motor tracking
  - (Practice with a balloon.)

Suggested Adaptations:

Use a larger ball

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 18:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in punting a ball	**I**	**DR**	**-**	**-**

Instructional Objective A:

a. Focus eyes on the ball and hold ball in both hands.
b. Approach the point of contact with a one or three step sequence.
c. Drop the ball downward and forward toward the intended contact point.
d. When the ball is knee height, extend the leg forcefully and contact the ball on the instep of the foot with the toe pointed.
e. Follow through by flexing the thigh toward the trunk and moving the kicking foot to a position near face height.
f. Absorb the force of the momentum by landing on the non-kicking leg and then the kicking leg.

Instructional Objective B:

Coordinate the elements of punting, and punt a football or a soccer ball at least 20 yards, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration/deceleration of the kicking leg
  - (Practice kicking with one foot and not letting the kicking foot touch the floor.)

Proprioceptive (page 80)
- control body and limbs in relationship to the ball
- control the amount of force to kick ball
- cross lateral movement of legs
- bilateral movement of arms
  - (Practice regular kick motion.)

Tactile (page 83)
- awareness of when ball is released from hand and has contacted the foot
  - (Roll the ball to the student while he/she is blindfolded and barefooted. Have the student kick on contact with the ball.)

Vision (page 87)
- fixation
- ocular motor tracking
  - (Practice with a balloon.)

Suggested Adaptations:

Use a larger ball or balloon
Practice bouncing and kicking

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 19:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in dribbling with the hands	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while walking and dribbling a 10 to 12 inch ball at least 40 feet with the dominant and then non-dominant hand.

a. Focus the eyes forward and up (eyes focused at least 10 feet beyond the dribbler, not on the ball).
b. Lean the trunk slightly forward, with the knees flexed.
c. Contact the ball with the finger tips, pushing the ball forcefully to the floor by extending the elbow and flexing the wrist.
d. Contact the floor with the ball slightly to the outside and in front of the body on the dribbling side.
e. Receive and control the dribbled ball between knee and hip level.

Instructional Objective B:

Coordinate the elements of form in a smooth dribbling action, dribbling a 10 to 12 inch ball 50 feet through a series of four 90 degree turns (two left and two right) while changing hands and moving at moderate to fast speeds without losing control of the ball.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- acceleration/deceleration of motion

Proprioceptive (page 80)
- adjustment of body parts in dribbling action
- unilateral coordination of dribbling arm
- cross lateral coordination of legs and nondribbling arms
  - (Practice maintaining control of the ball while dribbling without running. Practice dribbling with dominant hand.)

Tactile (page 83)
- awareness of ball contacting finger tips
  - (Practice gripping a yarn ball when it contacts the hand.)

Vision (page 87
- ocular motor tracking
- fixation
  - (Initially practice dribbling while watching ball.)

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 20:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the forehand strike	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while striking a tennis ball (bounced to a point waist high on the forehand side) with a racquet, two consecutive times.

a. Stand with non-dominant side facing target and dominant side away from target.
b. Dominant hand grips the racquet with the 'V' between the thumb and first finger on top of the handle.
c. Focus eyes on the ball from approach to contact with the racquet.
d. Shift weight to back foot as arm and racquet are extended behind and below shoulder level during backswing.
e. Strike the ball by shifting weight to front foot as hip, spine, and shoulder rotate during the swing.
f. Shoulder, elbow, wrist, and racquet are aligned at contact with the ball.
g. Follow through well beyond the point of contact.

Instructional Objective B:

Coordinate the elements of a forehand strike and hit a tennis ball into a target area 30 feet square centered 45 feet away, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- muscle control of grip
  - (Practice smooth movement while balancing on a tilt board.)

Proprioceptive (page 80)
- control position of body and limbs in relationship to ball and target
- control force of striking arm
- position of racquet in hand
- cross lateral movement
  - (Practice hitting ball from various distances. Practice twisting upper body against lower body during follow through.)

Tactile (page 83)
- contact with grip
  - (Practicing catching with varying textures of balls.)

Vision (page 87)
- ocular motor tracking
  - (Practice tracking a ball. Practice hitting a ball swinging from overhead.)

Suggested Adaptations:

Use a larger ball or a balloon
Use a larger or heavier racquet

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 21:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the underhand strike	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while striking a five to ten inch ball with the underhand strike, two consecutive times.

a. Stand with the racquet shoulder high, facing the target.
b. Focus the eyes on the ball.
c. Place the feet shoulder width apart, pointing at the target.
d. Swing the racquet backward to a point at least 45 degrees beyond the trunk, transferring the weight to the striking arm side.
e. Step forward toward the target while forcefully bringing arm forward and up.
f. Contact the ball below the midpoint of the ball with the striking portion of the racquet.
g. Follow through well beyond the contact point, with the racquet in line with the intended target. Non-striking arm swings in opposition.

Instructional Objective B:

Coordinate elements of appropriate underhand strike and project a five to ten inch ball at least nine feet high and into a 20 foot square target marked on the floor and centered 40 feet away, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- muscle control on grip
- acceleration/deceleration of swinging arm and body
  - (Practice smooth movements while balancing from one foot to the other.)

Proprioceptive (page 80)
- control position of body and limbs in relationship to ball and target
- control force of strike
- cross lateral movements
  - (Practice striking a ball from various distances. Practice twisting upper body against lower body during follow through.)

Tactile (page 83)
- control grip
  - (Practice striking a balloon.)

Vision (page 87)
- ocular motor tracking
  - (Practice striking a ball swinging from overhead.)

Suggested Adaptations:

Use a beach ball or balloon

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 22:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence				
in the backhand strike	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while using a short racquet to strike a tennis ball bounced waist high on the backhand side, two consecutive times.

a. Stand with the racquet shoulder high, facing the target.
b. Grip the racquet with the thumb on the back side of the handle and the first knuckle on top of the racquet handle.
c. Focus the eyes on the ball throughout the swing.
d. Initiate swing by transferring weight to non-dominant foot as the racquet is moved across the front of the body toward the non-dominant side.
e. Strike the ball by tranferring weight to the lead foot and forcefully move the racquet forward.
f. Rotate shoulders and straighten the elbow so that the shoulder, elbow, wrist, and racquet are aligned as ball is contacted.
g. Follow through with racquet well beyond the point of contact.

Instructional Objective B:

Coordinate all of the elements of appropriate form, hitting a tennis ball with a short racquet to a target 30 foot square, target area centered 45 feet away, two consecutive times.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- muscle control of grip
  - (Practice smooth movement while walking on a low balance beam.)

Proprioceptive (page 80)
- control position of body and limbs in relationship to ball and target
- cross lateral movements
  - (Practice doing cross lateral movements on a minitrampoline.)

Tactile (page 83)
- contact with grip
  - (Practice finding objects scattered on the floor while blindfolded.)

Vision (page 87)
- ocular motor tracting
- fixation
  - (practice striking a ball swinging from overhead.)

Suggested Adaptations:

Use a larger ball or a balloon
Use a larger or heavier racquet
Practice hitting a swinging ball

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 23:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in batting	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while hitting a four to six inch ball with a bat, two consecutive times.

a. Stand with the feet shoulder width apart, parallel to the path of the pitch, with weight on rear foot and knees slightly bent.
b. Grip the bat with the dominant 'back' hand on top.
c. Hold the bat with the second set of knuckles aligned (not deep in the palm of the hands).
d. Position hands in front of the 'back' shoulder with the bat angled away from the pitcher and the angle between the upper part of the back arm and the trunk at least 45 degrees.
e. Focus the eyes on the ball throughout its path of flight.
f. Transfer weight back on foot away from the pitcher.
g. Shift all of the weight to the lead (front) foot during the swing.
h. Rotate the hips and then the shoulders.
i. Align the lead shoulder, elbow, wrist and bat, at the time when the ball is contacted
j. Follow through well beyond the point of contact.

Instructional Objective B:

Coordinate elements of batting, and hit three consecutive four to six inch balls that have been pitched at a moderate speed into the strike zone.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- control acceleration/deceleration of body and limbs
- muscle control of grip
  - (Practice smooth movement while walking on a low balance beam.)

Proprioceptive (page 80)
- control position of body in relationship to ball and target
- control force of swing
  - (Practice hitting ball pitched from various distances. Practice twisting upper body against lower body during follow through.Practice other activities which require that both arms work at the same time.)

Tactile (page 83)
- control grip
  - (Play catch with various textures of balls.)

Vision (page 87)
- ocular tracking
  - (Practice batting a ball swinging from overhead.)

Suggested Adaptations:

Use a larger ball or a balloon
Use a larger or heavier racquet
Practice hitting a swinging ball

Goal 1: Demonstrate Competence on Selected Fundamental Motor Skills

Short Term Objective 24:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in rope jumping	**ID**	**R**	**-**	**-**

Instructional Objective A:

Demonstrate the following elements of form while jumping rope.

a. Focus the eyes forward (at least five feet in front of the body, not on the feet).
b. Hold the rope and position the elbows and hands close to the side of the body and near the hips.
c. Maintain a straight body alignment of the ankles, hips, shoulders, and head.
d. Swing the rope overhead with both hands, from back to front, so that it touches the floor approximately one foot in front of the feet.
e. Apply most of the force to the rope with wrist motion.
f. Jump directly upward with both feet simultaneously just prior to the time the rope hits the floor. (Jump between one foot and four feet over the rope.)
g. Land and complete a slight rebound jump for balance while the rope is overhead.

Instructional Objective B:

Coordinate the elements of form in a smooth jumping motion and jump at a moderate rhythm (30 jumps per minute) for one minute, two consecutive times with no more than four misses.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- dynamic balance
- overcoming force of gravity
- muscle tone in legs and arms
  - (Practice standing on one foot, hopping on one foot, and jumping with two feet.)

Proprioceptive (page 80)
- awareness of body parts to each other and to rope
- awareness of rhythm
  - (Practice swinging the rope next to the body, jump whenever the rope touches the ground.)

Tactile (page 83)
- contact of rope with hands
  - (Practice gripping various textures of balls.)

Vision (page 87)
- fixation of eyes
  - (Practice tracking a swinging rope.)

Suggested Adaptations:

Jump over a stationary rope
Jump over a swinging rope

ESSENTIAL GOALS AND STUDENT DEVELOPMENT: SHORT TERM OBJECTIVES FOR SPECIAL PHYSICAL EDUCATION K-12

GOAL 2: DEMONSTRATE KNOWLEDGE ON SELECTED COGNITIVE CONCEPTS

Short Term Objective 1:	K/3	4/6	7/9	10/12
Demonstrate knowledge of selected cognitive concepts of cardiovascular endurance	-	I	DR	-

Instructional Objective A:

Demonstrate knowledge of selected cognitive concepts of cardiovascular endurance (75 percent mastery on a test covering the following areas):

a. Effects of cardiovascular endurance on the reduction of cardiovascular risk factors and other activity-related health risks.
b. Effects of aerobic endurance on normal growth and development.
c. Effects of aerobic endurance on physical performance.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of cardiovascular endurance.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 2:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of the key concepts of the beneficial effects of activity	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate knowledge of the effects of exercise and training in the following areas: (80 percent mastery of associated knowledge test)

a. Aerobic/anaerobic energy production.
b. Muscular fitness-endurance, strength, power, and flexibility.
c. Growth and development.
d. Physical health benefits.
e. Mental and social health benefits.
f. Physical activity skills and knowledge.
g. Exercise myths and contraindicated exercises.

Instructional Objective B:

Demonstrate the ability to apply the knowledge included in Instructional Objective A to the development of a personalized sequential program of activities designed to obtain and maintain the beneficial effects of exercise (80 percent of mastery on a written test in which a student applies knowledge of application criteria).

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 3:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts of body composition	-	I	DR	-

Instructional Objective A:

Demonstrate knowledge of the effects of body composition (75 percent mastery on a test covering the following areas):

a. Ideal body weight, overweight, and obesity.
b. Lean body mass.
c. Diet, exercise, and body weight control.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of good body condition.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 4:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts of flexibility	-	I	DR	-

Instructional Objective A:

Demonstrate knowledge of the effects of flexibility (75 percent mastery on a test covering the following areas):

a. Identify and describe methods of determining level of flexibility.
b. Identify levels of flexibility that contribute to reduction of health risks and injuries.
c. Identify effects of flexibility on physical performance.
d. Identify effects of flexibility on physical activity.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in the Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of flexibility.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 5:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts of muscular strength and endurance	-	I	DR	-

Instructional Objective A:

Demonstrate knowledge of the effects of muscular strength and endurance (75 percent mastery on a test covering the following areas):

a. Identify small and large group muscles.
b. Identify effects of muscular strength and endurance on physical performance.
c. Identify muscular strength and endurance that contribute to reduction of activity-related health risks.
d. Identify effects of muscular strength and endurance on normal growth and development.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of muscular strength and endurance.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 6:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of the effects of activity on physical fitness	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate knowledge of the effects of exercise on physical fitness (75 percent mastery on a test covering the following areas):

a. Components of health related fitness.
b. Amount of activity related to health benefits.
c. Components of performance related fitness.
d. Amount of activity related to performance benefits.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 7:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts of physical performance	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate knowledge of the effects of physical performance (75 percent mastery on a test covering the following areas):

a. Effects of cardiovascular and muscular systems on physical performance.
b. Effects of stress on physical performance.
c. Effects of diet on physical performance.
d. Effects of sleep on physical performance.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of improved physical performance.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 8:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts of posture development and maintenance	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate knowledge of the effects of posture development and maintenance (75 percent mastery on a test covering the following areas):

a. Correct body posture.
b. Benefits of correct body posture.
c. Effects of body posture on physical activity.
d. Effects of body posture on athletic physical performance.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of body posture development and maintenance.

Goal 2: Demonstrate Knowledge on Selected Cognitive Concepts

Short Term Objective 9:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts of weight control	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate knowledge of the effects of weight control (75 percent mastery on a test covering the following areas):

a. Components of related weight control.
b. Effects of diet on weight control.
c. Effects of activity on weight control.
d. Benefits of weight control.

Instructional Objective B:

Demonstrate the ability to apply (75 percent mastery on a written test in which a student applies knowledge of application criteria) the knowledge included in Instructional Objective A to the design of a personal activity program intended to obtain and maintain health related benefits of weight control.

ESSENTIAL GOALS AND STUDENT DEVELOPMENT: SHORT TERM OBJECTIVES FOR SPECIAL PHYSICAL EDUCATION K-12

GOAL 3: DEMONSTRATE COMPETENCE ON SELECTED BODY CONTROL SKILLS

Short Term Objective 1:	K/3	4/6	7/9	10/12
Demonstrate appropriate standing posture	ID	R	-	-

Instructional Objective A:

Demonstrate the following elements of appropriate standing posture on two consecutive observations.

a. Frontal alignment: stand with the line of gravity passing through the mid points (front view) of the head, neck, spine, vertebrae, hips, and ankles. Shoulders and hips (front view) are in line with each other.

b. Anterior/Posterior alignment: stand with the ear (side view), center of the shoulder mass, slightly behind the center of the hip area, slightly in front of the center of the knee and in front of the ankle joint.

Instructional Objective B:

Maintain appropriate standing posture.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- static balance to remain upright
  - (Practice standing with a book balanced on the head.)

Proprioceptive (page 80)
- awareness of relationship of body parts
  - (Practice appropriate position while looking in a mirror.)

Primitive Reflexes (page 93)
- overcoming force of gravity
  - (Perform exercises to improve leg extensor tone, shoulder girdle, and neck muscle strength.)

Goal 3: Demonstrate Competence on Selected Body Control Skills

Short Term Objective 2:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate dynamic upright balance while walking	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate most of the following elements of an appropriate dynamic upright balance.

a. Head remains level.
b. Back straight.
c. Leading with the knee first, push off with toes of foot.
d. Foot follows and heel reaches to meet the ground.
e. Point of foot contact is directly under the knee, with knee slightly flexed.
f. Walk slowly with feet landing lightly and gently.
g. Arms should swing in opposition.

Instructional Objective B:

Maintain appropriate dynamic upright balance elements.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
knowledge of where body is in space
dynamic balance
(Practice walking with a bean bag on top of the head.)
Proprioceptive (page 80)
cross lateral coordination
knowledge of where body parts are in relation to each other
(Practice walking criss cross over a line on the floor with arms swinging in opposition.)

Goal 3: Demonstrate Competence on Selected Body Control Skills

Short Term Objective 3:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence on lifting and lowering	-	I	DR	-

Instructional Objective A:

Demonstrate the following elements of appropriate lifting and lowering weights on two consecutive observations.

a. Space feet shoulder width to provide balance and to evenly distribute the weight.
b. Lift on a count of two.
c. Lift the bar from the floor to the chest, keeping it close to the body.
d. Keep the back straight, with hips below the shoulders to prevent straining back muscles.
e. Lower on a count of four.

Instructional Objective B:

Maintain appropriate lifting and lowering elements for at least 18 weeks.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- static balance
- muscle tone
  - (Practice balancing on tilt board.)

Proprioceptive (page 80)
- awareness of body in relationship to weight distribution
  - (Practice lifting movement with no weights, and gradually add weight.)

Tactile (page 83)
- control of grip
  - (Lift light objects with various textures.)

Primitive Reflexes 93)page)
- overcome gravity
  - (Lift weights to strengthen arms and legs.)

Goal 3: Demonstrate Competence on Selected Body Control Skills

Short Term Objective 4:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence on the forward shoulder roll	**I**	**DR**	**-**	**-**

Instructional Objective A:

Demonstrate most of the following elements of an appropriate forward shoulder roll.

a. Assume tuck position, reach forward and place hands on floor.
b. Tuck head, touching chin to chest, and place head on the mat.
c. Round the back.
d. Roll forward onto back of head and back.
e. Regain tuck.

Instructional Objective B:

Maintain appropriate forward shoulder roll elements.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance during roll
(Practice jumping and turning on a minitrampoline.)
Proprioceptive (page 80)
bilateral coordination
coordination of body parts to assume rolling positions
(Practice the tucked position and rock back and forth. Practice pulling or pushing to locomote on a scooterboard using both hands together.)

Suggested Adaptations:

Practice rolling down a slanted mat.

Goal 3: Demonstrate Competence on Selected Body Control Skills

Short Term Objective 5:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence on the backward shoulder roll	-	I	DR	-

Instructional Objective A:

Demonstrate the following elements of an appropriate backward shoulder roll.

a. Assume tuck position, palm of hands flat on the floor.
b. Duck head, touching chin to chest.
c. Round back and keep head and knees to chest.
d. Rock backward on back, rolling over shoulders and head.
e. Touch toes to floor and regain balance.
f. Resume starting position.

Instructional Objective B:

Maintain appropriate backward roll elements.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance during roll
(Rock backward and forward on the back in a tuck position.)
Proprioceptive (page 80)
awareness to assume appropriate positions during roll
bilateral coordination
(Practice the tucked position and rock back and forth. Practice pulling or pushing to locomote on a scooterboard using both hands together.)
Primitive Reflexes (page 93)
overcome gravity
(Perform curl ups and push ups.)

Suggested Adaptations:

Practice rolling down a slanted mat.

Goal 3: Demonstrate Competence on Selected Body Control Skills

Short Term Objective 6:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence on a cartwheel (roundoff)	-	I	DR	-

Instructional Objective A:

Demonstrate most of the following elements of an appropriate turning cartwheel (roundoff).

a. Stand with side to direction of cartwheel.
b. Arms and feet shoulder width apart with arms extended overhead.
c. Bend sideways until hand touches the ground.
d. As first hand touches the ground, kick upward with lead leg and extend the back.
e. As second hand touches the ground, legs continue over, touching the gound on opposite side of body.
f. Resume starting position.

Instructional Objective B:

Maintain appropriate cartwheel elements for at least 18 weeks.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
dynamic balance when moving from leg to to leg support
(Practice jumping and turning on a minitrampoline.)
Proprioceptive (page 80)
awareness to assume appropriate positions of the body
coordination of body parts with each other
unilateral curl
(Do wheelbarrow races.)
Tactile (page 83)
contact of hands and feet with floor
Vision (page 87)
ocular motor tracking during the cartwheel
Primitive Reflexes (page 93)
unilateral coordination, walk hands and feet through the cartwheel without lifting legs, to practice appropriate placement on the floor
(Practice doing handstands against wall to improve integration of primitive reflexes in arms and legs.)

ESSENTIAL GOALS AND STUDENT DEVELOPMENT
SHORT TERM OBJECTIVES FOR
SPECIAL PHYSICAL EDUCATION K-12

GOAL 4: DEMONSTRATE COMPETENCE ON SELECTED PHYSICAL FITNESS SKILLS

Short Term Objective 1:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate a health related level of cardiovascular endurance	**I**	**D**	**R**	**R**

Instructional Objective A:

For grades K-3, a 600 yard run/walk is recommended; grades 4-12, a mile run/walk is recommended with the following standards:

*Recommended Standards by Age

	600 Yard Run/Walk		Mile Run/Walk	
	7 - 9	10 - 12	7 - 9	10 -12
Males	3 min. 30 sec.	3 min. 30 sec.	12 min.	10 min.
Females	3 min. 30 sec.	3 min.	12 min.	12 min.

Instructional Objective B:

Maintain the level of cardiovascular endurance listed above.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
muscle control to maintain proper form while moving continually for a period of time
(Progressively increase the amount of time the student walks or runs.)

Proprioceptive (page 80)
cross lateral coordination
(Progressively lengthen the distance a student walks or runs with proper form. Perform exercises which improve strength of legs, abdominals and upper torso.)

Suggested standards are from Michigan Fitness for Youth Program, Reiff, G.G., Ph.D., and Kuntzleman, C., The University of Michigan, 1989. (For information on test administration, call Fitness for Youth, (313) 747-2697.)

Goal 4: Demonstrate Competence on Selected Physical Fitness Skills

Short Term Objective 2:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate a health related level of abdominal strength	**I**	**D**	**R**	**R**

Instructional Objective A:

Demonstrate a health related level of abdominal strength by completing the sit-up with the following standards.

*Recommended Standards by Grade Level
(sit-ups, ankles not held; 2 minute limit)

	K-3	4-6	7-9	10-12
Males	16	20	25	25
Females	16	20	25	25

(sit-ups, ankles held; 1 minute limit)

	K-3	4-6	7-9	10-12
Males	25	30	30	30
Females	25	30	30	30

NOTE:

Teachers may choose either test. Both use the standard position, arms over chest, knees bent; elbows touch legs and return. Not holding feet is better indication of abdominal strength.

Instructional Objective B:

Maintain the level of abdominal strength listed above.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
abdominal strength to perform sit-up with proper form
(Hold a rope over the student's abdomen and have him/her sit up by "climbing" hand over hand up rope.)
Primitive Reflexes (page 93)
lifting body against pull of gravity
(Rock back and forth with knees to chest and chin tucked.)

Suggested standards are from Michigan Fitness for Youth Program, Reiff, G.G., Ph.D., and Kuntzleman, C., Ed.D., The University of Michigan, 1989. (For information on test administration, call Fitness for Youth, (313) 747-2697.)

Goal 4: Demonstrate Competence on Selected Physical Fitness Skills

Short Term Objective 3:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate a health related level of upper arm and shoulder girdle strength	**I**	**D**	**R**	**R**

Instructional Objective A:

Demonstrate a health related level of upper arm and shoulder girdle strength by completing the pull-up with the following standards.

*Recommended Standards by Grade Level

	K-3	4-6	7-9	10-12
Males	1	1	3	3 or more
Females	1	1	1	1

It is suggested that the pull-ups be done so that the subject's arms must come down to an angle greater than 90 degrees. Full extension is not required.

Instructional Objective B:

Maintain the level of cardiovascular endurance listed above.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
muscle tone in hands, arms, and shoulder girdle to perform pull-up with proper form

Proprioceptive (page 80)
bilateral coordination
(Lying on the back with knees bent and feet flat on the floor, pull up on a broomstick held over the stomach, using arms.)

Suggested standards are from Michigan Fitness for Youth Program, Reiff, G.G., Ph.D., and Kuntzleman, C., Ed.D., The University of Michigan, 1989. (For information on test administration, call Fitness for Youth, (313) 747-2697.)

Goal 4: Demonstrate Competence on Selected Physical Fitness Skills

Short Term Objective 4:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate a health related level of trunk/lower back flexibility	**I**	**D**	**R**	**R**

Instructional Objective A:

Demonstrate a health related level of trunk/lower back flexibility by completing either the V-sit reach or the box sit reach with the following standards.

*Recommended Standards by Grade Level

V-Sit Reach (1 inch past heels)

	K-3	4-6	7-9	10-12
Males	more than 1 inch	1 inch +	1 inch +	1 inch +
Females	more than 1 inch	1 inch +	1 inch +	1 inch +

Box-Sit Reach (1 inch past heels)

	K-3	4-6	7-9	10-12
Males	16 inches	16 inches	16 inches	16 inches
Females	16 inches	16 inches	16 inches	16 inches

Instructional Objective B:

Maintain the level of trunk/lower back flexibility listed above.

Sensory Motor Skills and Lead Up Activities:

Proprioceptive (page 80)
- ability to fully stretch legs, lower back and upper back
- ability to fully stretch lower leg and upper leg muscles
- bilateral coordination of trunk and arm muscles
  - (Stretch and contract muscles in back.)

Primitive Reflexes (page 93)
- overcoming gravity
  - (Maintain a seated position with the legs extended and the pelvis upright.)

Suggested standards are from Michigan Fitness for Youth Program, Reiff, G.G., Ph.D., and Kuntzleman, C., Ed.D., The University of Michigan, 1989. (For information on test administration, call Fitness for Youth, (313) 747-2697.)

ESSENTIAL GOALS AND STUDENT DEVELOPMENT: SHORT TERM OBJECTIVES FOR SPECIAL PHYSICAL EDUCATION K-12

GOAL 5: DEMONSTRATE COMPETENCE ON SELECTED LEISURE SPORTS, GAMES, AND ACTIVITIES

Short Term Objective 1:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the forehand drive	-	-	ID	R

Instructional Objective A:

Demonstrate the following elements of form while performing a forehand drive at least two consecutive times.

a. Assume an appropriate forehand grip (eastern, continental, western).
b. From ready position, pivot toward sideline, simultaneously drawing the racquet/paddle back beyond midline of side, weight on back foot.
c. Start the drive by stepping forward, shifting weight from the back foot to the front foot.
d. Contact the object toward the front of the body with the racket/paddle face approximately parallel with the net/wall.
e. Continue follow through of the racket/paddle in the intended direction of the object (ball, shuttlecock, etc.).
f. Return to ready position.

Instructional Objective B:

Maintain all of the above elements of appropriate form and hit a designated area of the court two consecutive times.

SEE GOAL 1, SHORT TERM OBJECTIVE 20, Page 37

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 2:	K/3	4/6	7/9	10/12
Demonstrate competence in backhand drive	-	-	ID	R

Instructional Objective A:

Demonstrate the following elements of form while performing a backhand drive at least two consecutive times.

a. Assume appropriate grip.
b. From the ready position pivot toward the sideline, and transferring weight to back leg move the racquet/paddle to the back swing position, as the front shoulder turns toward the sideline.
c. As the backswing is completed and striking position is established, the student looks over the shoulder to see the approaching object. (The racquet/paddle and arm should be closer to the body than with the forehand.)
d. Start drive by uncoiling hips and shoulders while transferring the weight toward the forward foot, and continue swing through the stroke completion.

Instructional Objective B:

Maintain all the elements of appropriate form and hit a designated area of the court two consecutive times.

SEE GOAL 1, SHORT TERM OBJECTIVE: 22, Page 39

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 3:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the lob stroke	-	-	**ID**	**R**

Instructional Objective A:

Demonstrate the following elements of form while performing the lob stroke at least two consecutive times.

a. Prepare for the lob stroke using the same form required for the forehand or backhand strokes.
b. Open the racquet/paddle face during the forward swing.
c. Move the racquet/paddle in a low to high path through the forward swing and the follow through.

Instructional Objective B:

Maintain all of the elements of appropriate form and hit a designated area of the court two consecutive times.

SEE GOAL 1, SHORT TERM OBJECTIVE: 20, Page 37, or SHORT TERM OBJECTIVE: 22, Page 39

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 4:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the overhead stroke	-	-	**ID**	**R**

Instructional Objective A:

Demonstrate the following elements of form while performing the overhead stroke at least two consecutive times (smashes, tennis serve).

a. Get into position under and behind the object.
b. Move the racquet/paddle into position behind the head, elbow pointing slightly upward, with the racquet/paddle head pointing toward the ground.
c. Keep eyes focused on the object.
d. Bend the back slightly, with more weight on the rear foot.
e. Swing the raquet/paddle toward the object, with the elbow leading.
f. Contact the object 12 inches in front of the lead shoulder.
g. Continue the follow-through down and to the side of the body.

Instructional Objective B:

Maintain all the elements of appropriate form and hit a designated area of the court two consecutive times.

SEE GOAL 1, SHORT TERM OBJECTIVE: 20, Page 37

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 5:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of rules, strategies, etiquette, and their application	-	I	D	R

Instructional Objective A:

Demonstrate the following elements of knowledge while involved in racquet sports.

a. Label primary court dimensions and markings.
b. Explain scoring.
c. Identify four rules pertaining to serving or returning the serve.
d. State two rules that apply specifically to doubles play.
e. State four other rules of the game in addition to the ones already stated.
f. Identify two offensive singles strategies.
g. Identify two defensive singles strategies.
h. Identify two offensive doubles strategies.
i. Identify two defensive doubles strategies.
j. Identify two general strategies for successful game play.

Instructional Objective B:

Demonstrate knowledge of rules, strategies, and etiquette by scoring 80 percent or better on a test which includes the information in Objective A.

Instructional Objective C:

Demonstrate the following elements of understanding by applying rules, strategies, and etiquette during game play.

a. Complete three consecutive games without violating a game rule.
b. Implement or use shot selections that characterize two standard game strategies.
c. Complete three consecutive games without displaying behaviors inconsistent with recommended game etiquette.

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 6:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the elementary backstroke	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate the following elements of form while executing the elementary backstroke across the pool.

Leg Action - Inverted Whip Kick

a. Heels are drawn downward towards buttocks with knees spread apart approximately hip (recovery) width.
b. Rotate thighs inward so that the heels are positioned well outside the hips and knees (toes pointed and ankles flexed outward).
c. Bring legs forcefully together with the feet circling outward and toward the water surface (power phase).
d. Bring legs together into a glide position, ankles extended (glide phase).

Arm Action

a. Draw fingers up the sides to armpits, with elbows close to ribs (recovery phase.)
b. Extend arms diagonally outward to a point slightly above shoulder level (recovery phase.)
c. Press insides of arms and palms simultaneously toward the thighs (power phase), terminating with hands close to thighs (glide phase.)

Instructional Objective B:

Maintain all of the elements of appropriate form for five minutes.

Note: The swimming survival skills objectives are recommended with the understanding that not all school districts have the facilities to provide the means for delivery, however, the place of delivery could be at a location other than the school setting. If this is the case, schools may encourage the completion of the swimming survival skills by means of other local facilities, clubs, summer camps or recreational lakes, and swimming pools.

Sensory Motor Skills and Lead Up Activities:

Vestibular (page 77)
- acceleration/deceleration of stroke
- dynamic balance in water
  - (Perform various balance activities with eyes blindfolded.)

Proprioceptive (page 80)
- bilateral coordination of arms and legs
- awareness of body parts during proper movement
  - (Practice the movement out of the pool with instructor moving the limbs.)

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 7:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the swimming survival float	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate the following elements of form while executing the survival float for at least one minute.

a. Assume a vertical floating position with the arms and legs dangling, head at water's surface.
b. Take one full breath, then exhale under water.
c. Take a second breath by coordinating arm depression and scissors kick while lifting head.
d. Repeat (a), above, and continue with remaining performance standards.

Instructional Objective B:

Maintain all of the elements of appropriate form for five minutes.

Note: The swimming survival skills objectives are recommended with the understanding that not all school districts have the facilities to provide the means for delivery, however, the place of delivery could be at a location other than the school setting. If this is the case, schools may encourage the completion of the swimming survival skills lby means of other local facilities, clubs, summer camps or recreational lakes, and swimming pools.

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 8:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate knowledge of selected cognitive concepts in volleyball	-	-	**ID**	**R**

Instructional Objective A:

Demonstrate the following elements of knowledge while participating in volleyball.

a. Understand and be able to incorporate the basic rules of volleyball in competitive situations.
b. Identify the basic rules of volleyball on a written examination.
c. Identify selected historical information, formations, strategies, and terminologies on a written examination.
d. Understand and be able to incorporate scoring, playing strategies, and basic rotation, in competitive situations.
e. Understand and be able to incorporate basic court coverages, such as the 4-2 and 5-1 formation, in competitive situations.
f. Understand and be able to incorporate specialized court coverage formations, such as that used for 'blocking' and 'serve reception.'

Instructional Objective B:

Demonstrate all of the knowledge in volleyball by scoring 80 percent on a test that includes all of the elements in Objective A.

Lead Up Activities:

Explain scoring
Explain the boundaries of the volleyball court
Explain the basic rules of play

Goal 5: Demonstrate Competence on Selected Leisure Sports, Games, and Activities

Short Term Objective 9:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate competence in the fundamental mechanics and skills of a volleyball serve	-	-	**ID**	**R**

Instructional Objective A:

Demonstrate the following elements of correct form while serving a volleyball.

a. Position of the body
b. Arm position
c. Hand position
d. Correct arm swing and contact point
e. Transfer of weight
f. Follow through

Instructional Objective B:

Maintain all of the elements of appropriate form and hit the ball so that it falls in a designated area of the court three consecutive times.

ESSENTIAL GOALS AND STUDENT DEVELOPMENT: SHORT TERM OBJECTIVES FOR SPECIAL PHYSICAL EDUCATION K-12

GOAL 6: DEMONSTRATE COMPETENCE ON SELECTED SPORT RELATED PERSONAL-SOCIAL SKILLS

Special education students, as well as regular education students, vary in the manner in which they behave in social settings. The level of social responsibility ranges from participation in order to avoid punishment to participation in order to maintain self-respect.

Short Term Objective 1:	K/3	4/6	7/9	10/12
Demonstrate appropriate behavior when winning and/or losing a competitive event	I	D	R	-

Instructional Objective A:

Demonstrate most of the following characteristics of acceptable behavior when winning and/or losing competitive events when alternative behavioral ratings include: None, Some, Half, Most, or All of the Time.

a. Compliments at least one opposing player on the losing team on some positive aspect of play.
b. Does not communicate undue negative remarks about the losing or winning team.
c. Assumes the responsibility for losses rather than blaming them on conditions, officiating, or circumstances.
d. Graciously accepts compliments for good performance.
e. Seeks to learn from losses and converts them to a means for improvement rather than devaluating self and/or teammates.

Instructional Objective B:

Maintain all of the above elements of acceptable behavior in winning and losing situations in eight to ten competitive events.

Goal 6: Demonstrate Competence on Selected Sport Related Personal-Social Skills

Short Term Objective 2:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate appropriate cooperation behavior in a given sport	**I**	**D**	**R**	**-**

Instructional Objective A:

Demonstrate appropriate cooperation behavior in a sport related situation when alternative behavioral ratings include: None, Some, Half, Most, or All of the Time.

a. Join with peers to organize a sport team.
b. Develop a strategy for offense.
c. Develop a strategy for defense.

Instructional Objective B:

Maintain all of the above elements of acceptable behavior of cooperation situations in eight of ten sport related events.

Goal 6: Demonstrate Competence on Selected Sport Related Personal-Social Skills

Short Term Objective 3:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate appropriate fair play behavior in a given sport	**I**	**D**	**R**	**R**

Instructional Objective A:

Demonstrate most of the following characteristics of acceptable fair play behavior for a given sport when alternate ratings include: None, Some, Half, Most, or All of the Time.

a. Participate in a friendly manner against members of an opposite team.
b. Follow the rules of the game.
c. Follow the etiquette of the game.
d. Exhibit good sportsmanship during the contest.

Instructional Objective B:

Maintain all of the above elements of acceptable behavior of fair play in eight out of ten sport events.

Goal 6: Demonstrate Competence on Selected Sport Related Personal-Social Skills

Short Term Objective 4:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate appropriate behavior when following directions of a given sport	**I**	**D**	**R**	**R**

Instructional Objective A:

Demonstrate most of the following characteristics of acceptable behavior when following directions for a given sport when alternate ratings include: None, Some, Half, Most, or All of the Time.

a. Listens to all the instructions before starting to play.
b. Gives visual attention to instructor while skills are being demonstrated.
c. Asks questions related to the instructions to clarify the concept.

Instructional Objective B:

Maintain all of the above elements of acceptable behavior in following directions situations in eight of ten sport events provided in class.

Goal 6: Demonstrate Competence on Selected Sport Related Personal-Social Skills

Short Term Objective 5:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate appropriate leadership behavior in a given sport	-	I	D	R

Instructional Objective A:

Demonstrate most of the following characteristics of leadership behavior in a sport related situation when alternative behavioral ratings include: None, Some, Half, Most, or All of the Time.

a. Assumes responsibility for self, squad, team, as assigned.
b. Suggests team strategies for a particular game or situations.
c. Helps organize other students.

Instructional Objective B:

Maintain all of the above elements of acceptable behavior of leadership situations in eight of ten sport related events.

Goal 6: Demonstrate Competence on Selected Sport Related Personal-Social Skills

Short Term Objective 6:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate reliability and responsibility for class preparation and behavior in class	**I**	**D**	**R**	

Instructional Objective A:

Demonstrates most of the following characteristics of reliability and responsibility in physical education settings. Behavioral ratings include: None, Some, Half, Most, or All of the Time.

a. Arrives for class on time.
b. Dresses in appropriate shoes and clothing to participate if change of clothing is required.
c. Assumes responsibility for understanding and following instructions.

Instructional Objective B:

Maintains reliability and responsibility in 8 out of 10 physical settings.

Goal 6: Demonstrate Competence on Selected Sport Related Personal-Social Skills

Short Term Objective 7:	**K/3**	**4/6**	**7/9**	**10/12**
Demonstrate the ability to appropriately communicate with peers and teachers	**I**	**D**	**R**	

Instructional Objective A:

Demonstrates most of the characteristics of appropriate communication in physical education settings. Behavioral ratings include: None, Some, Half, Most, or All of the Time.

a. Asks for clarification of instructions if necessary.
b. Communicates with other team or group members in sports and games by listening and participating in decisions.
c. Demonstrates socially appropriate language.
d. Uses socially appropriate non-verbal communication.

Instructional Objective B:

Maintains appropriate communication in eight out of ten physical education settings.

CHAPTER 4

DEVELOPMENTAL ACTIVITIES

Students with learning disabilities, emotional impairments and educable mental impairments may have underlying developmental problems which inhibit them from gaining the objectives listed in Chapter 3. (Table 4.1) Repetitive drills which are not at the developmental level of the student do not help the student achieve the objectives. This results in frustration for both the student and teacher because the student seems unable to advance in physical education. With an extraordinary amount of repetition, some students will acquire the skill; however, this type of skill is a splinter skill and not at the true developmental level of the student. Splinter skills cannot be transferred to a similar skill in another activity. The following chapter describes six areas in which the students may have underlying problems and provides activities that assist in building basic readiness skills which will help the student achieve the objectives. The areas are: a) vestibular system, b) proprioceptive system, c) tactile system, d) visual system, e) auditory system, and f) primitive reflex integration. Suggested activities which develop each area are listed in developmental order so that the student can participate at the appropriate level. The activities are only suggestions and the physical education teacher can use them to either create new games or adapt traditional games to the developmental level of students.

Vestibular System Development

Definition The vestibular system, located in the inner ear consists of the vestibule and the semi-circular canals. A primary function of the vestibular system is to organize the part of the brain which receives information from the senses: vision, hearing, touch, balance, and proprioceptive. The vestibular system tells the brain the position of the head, and then helps the brain relate all of the sensory input to the body. For example, when a baby first discovers his feet, he remembers where they are by their relationship to his head through vision, touch, and movement. Another important function of the vestibular system is to provide muscle tone through dynamic and static movements.

Development The vestibular system is developed through movement which affects the various parts of the inner ear. Up and down movements stimulate the vestibule. Rotational movement or acceleration and deceleration stimulates the semi-circular canals. Both senses working together give the brain precise information about the relationship of the body to gravity, movement, speed, and direction.

Problems Immature development of the vestibular system causes delays in the integration of the primitive reflexes as well as immature muscle tone, balance and movement. This also results in inaccurate sensory feedback to the brain

Movement Characteristics of Target Populations

LEARNING DISABLED

Sensory Problems:

- ☐ Poor vestibular development
- ☐ Poor proprioceptive awareness
- ☐ Poor tactile awareness
- ☐ Poor visual awareness
- ☐ Presence of primitive reflexes

Motor Problems:

- * Poor equilibrium/balance
- * Poor body concept, awareness, schema and image
- * Poor spatial awareness
- * Low ocular motor control
- * Low muscle tone
- * Short attention span
- * Lack of unilateral, cross-lateral or bilateral coordination

EMOTIONALLY IMPAIRED

Sensory Problems:

- ☐ Poor vestibular development
- ☐ Poor proprioceptive awareness
- ☐ Poor tactile awareness

Motor Problems:

- * Poor equilibrium/balance
- * Poor body concept, awareness, schema and image
- * Behavior interferes with social, emotional and physical growth
- * Poor coordination because of withdrawal from activities
- * Inability to learn at expected rate
- * Tactile defensiveness

EDUCABLY MENTALLY IMPAIRED

Sensory Problems:

- ☐ Poor vestibular development
- ☐ Poor proprioceptive awareness
- ☐ Poor tactile awareness
- ☐ Poor visual awareness
- ☐ Poor auditory awareness
- ☐ Presence of primitive reflexes

Motor Problems:

- * Poor equilibrium/balance
- * Poor body concept, awareness, schema and image
- * Poor spatial awareness
- * Low ocular motor
- * Low muscle tone
- * Short attention span
- * Delayed development of gross and fine motor skills

TABLE 4.1

about the movements and position of the body. If a child does not know how or where his body is moving, he will have poor coordination. Without adequate vestibular stimulation, problems will continue and the child may have poor self-concept.

When self-concept, which includes body awareness, body schema and body image, is poorly developed, self-esteem can be negatively affected. Children with poor self-esteems are less likely to participate in or be encouraged to participate in movement activities. Therefore, the vestibular system and other senses are deprived of the variety of stimulations needed to improve the movement problems. The major task facing adapted physical educators is to break the cycle of inaccurate sensory input which is inhibiting the development of mature movement skills.

The major types of vestibular problems are hypervestibular and hypovestibular. Hypervestibular means that the child is overly sensitive to stimulation of the vestibule and semi-circular canals. A child who is not receiving adequate information from the vestibular system is hypovestibular.

Hypervestibular Hypervestibular problems occur when a child has not received enough vestibular stimulation to cause regulation of the amount of incoming sensation going to the brain. The brain becomes overloaded and cannot organize the information for future motor plans. An example would be a child who cannot concentrate on one task because the brain cannot focus on the appropriate input. The child will have gravitational insecurity because of a feeling of constant motion.

Hypovestibular Most students with motor problems are hypovestibular. The student will constantly move in order to stimulate the vestibular system and because of poor static muscle control. Both poor integration of primitive reflexes and poor development of equilibrium reactions will result when there is inadequate vestibular organization of sensory input. These two problems lead to an inability to hold a stable posture and to develop good muscle tone.

Movement Characteristics

Hypervestibular	Hypovestibular
Dislikes spinning movements	Low muscle tone
Unable to stay on task	Uncoordinated movement patterns
Does not like to participate in activities	Poor body awareness
Unable to catch, throw, strike, kick	Poor motor planning
Uncoordinated locomotor patterns	Poor ability to visually track or fixate on objects
Does not know right and left	Unable to sit still
Does not move cross-laterally	Poor balance
Poor balance	Falls down easily
	Poor attention span
	Does not cross midline

Recommended Activities for Vestibular Problems

Hypervestibular	Hypovestibular
Slow rotation	Spinning
Slow swinging	Swinging
Rocking	Jumping
Slow linear movements	Acceleration/Deceleration
Balance	Quick changes of direction
	Balance
	Vibration
	Rocking
	Upside down
	Rolling

(See Table 4.2 for suggested activities.)

Proprioceptive System Development

Definition The proprioceptive system is responsible for receiving stimulation from the muscles and joints as movement occurs. From information gained through the bending or extending of the joints and the contracting or stretching of the muscles, the brain perceives the position of the body. Basically, spatial maps of the body are developed. For example, a runner is aware of the amount and speed of each stride through information received and organized by the proprioceptive system.

Development The proprioceptive system develops in relationship to the vestibular system. The vestibular system receives information about the position of the head in relationship to gravity. The proprioceptive system organizes input from the joints and muscles in relationship to the head. For example, if a child is standing on his head, the vestibular system tells him that he is up-side-down. The proprioceptive system tells him that his feet are now above his head and where to put his feet if he wants to return to standing.

Problems The first indication that a child has a proprioceptive problem is that he will have difficulty naming and locating body parts. If you ask the child to point to his knees, he will have to look at the knees to locate them. In addition, the child may not be able to move a body part on command.

A child with poor proprioceptive awareness will also have low body awareness. Movement will appear clumsy and unplanned. An example would be a child who collides with objects because his proprioceptive system does not automatically judge the amount of movement it would take to avoid contact.

Activity	Conditions	Effect on Sensory System
Swinging and Spinning on Vestibular Swing or Hammock	Student sits cross legged with hands on knees in the center of the swing or hammock, holding the head in various positions, with eyes open. Swing and spin rapidly in varying directions.	The variety of swinging and spinning motions will stimulate the semi-circular canals in the inner ear. Through this stimulation, the vestibular system will activate the ability of the brain to organize sensory input.
Spinning or Gliding on a Scooter Board	Student sits or lies prone on the scooter board. The teacher or a partner spins or pulls the student rapidly. Student can spin himself, or ride the scooter board down a ramp.	Spinning and acceleration will stimulate the semi-circular canals in the inner ear. Through this stimulation, the vestibular system will increase the ability of the brain to organize sensory input. The activity also improves equilibrium when the student is seated. When holding the teacher's hands, the ability to cocontract improves.
Log Rolling	Student rolls on a mat with arms extended overhead and legs straight. Student should attempt to roll continually in a straight path.	The rotation of the roll stimulates the semi-circular canals in the inner ear. Through this stimulation, the vestibular system will increase the ability of the brain to organize sensory input.
Bouncing on Large Therapy Ball or Gym Ball	Student sits on therapy ball and bounces. To begin, the student should have support from the teacher or a partner by holding hands. As equilibrium improves, student can bounce himself.	The up and down motion stimulates the vestibule. The vestibule activates the ability of the brain to organize sensory input, aids in improving equilibrium and improving cocontraction in order to keep the body upright.
Somersaults Foreward and Backward	Student performs continual forward or backward somersaults on a mat. The teacher or a partner can follow and push the student into the roll to promote optimal acceleration in the roll.	The rotational movement stimulates the semi-circular canals and the upside-down position stimulates the vestibule. The stimulation activates the ability of the brain to organize sensory input. Cocontraction improves as the student maintains a straight path.
Running in a Zigzag Pattern	Student runs as fast as possible through a series of cones set in a zigzag pattern.	The quick changing of directions and acceleration/ deceleration will stimulate the semi-circular canals. The up and down motion of the run will stimulate the vestibule. The stimulation activities the ability of the brain to organize sensory input.

TABLE 4.2 SUGGESTED ACTIVITIES FOR VESTIBULAR PROBLEMS

TABLE 4.2 (continued) SUGGESTED ACTIVITIES FOR VESTIBULAR PROBLEMS

Activity	Conditions	Effect on Sensory System
Jumping on a Mini-trampoline	Student jumps on minitramp.	The up and down motion stimulates the vestibule which activates the ability of the brain to organize sensory input. In order to remain in balance on the mini-tramp, equilibrium and cocontraction improve.
Partner Spinning	Two students hold hands and spin. The direction should be changed frequently.	Spinning stimulates the semi-circular canals in the inner ear. Through this stimulation, the vestibular system will activate the ability of the brain to organize sensory input. Cocontraction of the arms will improve through pulling.
Side to Side or Under and Over Basketball Pass with a Partner	Two students stand back to back. The basketball is passed by twisting side to side or handing the ball over the head and through the legs alternately.	The rotation from the twisting stimulates the semi-circular canals and the vestibule is stimulated by the up and down motion in the under/over pass. The stimulation activates the ability of the brain to organize sensory input.
One Touch Soccer	Students play soccer, but each student can only touch the ball one time consecutively. This allows the students to remain in continual motion and encourages all students to participate.	The quick direction changes and stop/start movements in soccer stimulate the semi-circular canals. As the vestibular system is stimulated, the visual, proprioceptive, and tactile input from the game are also organized.
Chain Tag	The student who is "it" tags another student, who then holds hands with "it". As each consecutive student is tagged, he must join the chain until everyone is part of the chain.	The quick changes of direction and acceleration/deceleration of the movement stimulate the semi-circular canals. Holding hands also stimulates the tactile and proprioceptive systems. Cocontraction is also improved.
Square or Folk Dancing	Students spin, change directions and move up and down, stopping and starting while they dance.	Spinning, changing directions, moving up and down, and stopping and starting stimulate both parts of the vestibular system. Equilibrium, cocontraction, proprioception, and tactile components of movement are also improved.

Movement Characteristics

Uncoordinated
Messy hand writing
Poor manipulative skills
Lack of refined movement/jerky movements
Frequent colliding with others
Poor body awareness
Poor motor planning
Poor spatial awareness
Immature locomotor and non-locomotor patterns
Inability to adapt body to specific tasks
Poor posture
Low muscle tone
Lack of desire to participate

Recommended Activities for the Proprioceptive System

Balance
Cocontraction
Pulling
Pushing
Lifting weights
Massage
Pressure
Rolling
Climbing
Move specific body parts on command

(See Table 4.3 for suggested activities.)

Tactile System Development

Definition The tactile system is basically the sense of touch. Receptors in the skin tell the brain the location, pressure, texture, and size of a touch. The tactile system also tells the brain the difference between pain and pleasurable touch sensations.

Development The tactile system develops with the vestibular and proprioceptive systems to further refine coordinated movement. As the student is organizing the position of the body in relationship to the head, joints, and muscles, the tactile system is stimulated by external contact with the other objects or other body parts. For example, when catching a ball, the three systems tell the student the following: a) where the ball is in relation to the body, b) what is the necessary position to catch the ball, c) what is the shape of the ball, d) what force is necessary to grasp the ball, and e) what is the texture of the ball.

TABLE 4.3 SUGGESTED ACTIVITIES FOR PROPRIOCEPTIVE PROBLEMS

Activity	Conditions	Effect on Sensory System
Scooter board	Student lies supine or prone on the scooter board and pushes or pulls himself with arms or legs. This activity can be practiced through a set pathway -- such as a zigzag pattern.	This will stimulate the joint receptors in the arms or legs through the compression and traction required to alternate between push and pull. Cocontraction is also improved in the abdominal and back muscles depending upon the position of the body on the scooter board.
Statues	Student holds a position demonstrated by the teacher for a determined amount of time without any movement. The teacher may place the student's body in the correct position.	This will stimulate the joint receptors through cocontraction of the muscles as they hold the determined position. When the teacher places the child into the correct position, tactile input reinforces the proprioceptive awareness.
Push-ups	Student performs a push-up against the wall or floor.	This will stimulate the joint receptors through compression of the muscles in the arms and upper back. Cocontraction increases muscle tone throughout the rest of the body as they perform the push up movement.
Modified Partner Sit-up	Student lies prone, knees bent, feet flat on the floor, and a partner will pull them up to sitting position by either holding hands or holding a rope.	This will stimulate the joint receptors through traction of the arms and cocontraction of the abdominals and lower body.
Body Walk Downs	Student stands then leans forward, puts one hand on the floor, puts the other hand on the floor, and walks the hands out as far away from the body as possible. This can also be done to the sides of the body.	This will stimulate the joint receptors through compression of the muscles in the arms and upper back. Cocontraction increases muscle tone throughout the rest of the body as movement is performed.
Body Balancers	Student attempts to balance on various parts of his body without falling down. An example of this would be balancing on a knee and an elbow.	This will stimulate the joint receptors through compression of the joints in direct contact with the movement. Cocontraction increases the muscle tone throughout the rest of the body as it stabilizes the position. The vestibular system and equilibrium are also stimulated.

Activity	Conditions	Effect on Sensory System
Wheelbarrow Race	Student holds partner's feet as he attempts to use his hands to walk.	This will stimulate the joint receptors of the wheelbarrow's arms through compression, and the joint receptors of the carrier's arms through traction. The rest of the muscles throughout the body will be stimulated by cocontraction.
Chinese Wrestling	Partners face each other, raise right hand, the left hand grasps the right wrist of the partner; each tries to touch their opponent's head with the right hand while preventing their opponent from doing the same.	This stimulates the joint receptors in the upper body through compression and cocontraction. The rest of the muscles throughout the body will be stimulated by cocontraction as they help to stabilize the body in the designated position.
Bicycle Pumps	Partners assume a sitting position with soles of feet touching one another. Partners now bicycle pump, keeping the soles of their feet in contact.	This stimulates the joint receptors in the knees, hips, arms, and abdominals through compression and cocontraction.
Crab-walk Tag	Student assumes the crab-walk position and plays regular tag.	This stimulates the joint receptors in the legs, shoulders, arms, and neck through compression and cocontraction.
Caterpillar Relay	Teams of three or four, sitting in the crab position, one behind the other. Each person wraps their legs around the person in front of them and they walk foreward. The first person will be on all fours.	This stimulates the joint receptors in the shoulders, arms, and neck through compression and cocontraction.
Human Machine	First person assumes any selected position, and each member fron then on will attach to the machine with various body parts drawn out of a hat.	This stimulates the joint receptors of the various muscles used in different positions through compression and cocontraction.

TABLE 4.3 (continued) SUGGESTED ACTIVITIES FOR PROPRIOCEPTIVE PROBLEMS

Another important purpose of the tactile system is to develop the ability to discriminate between negative and positive touch. As the student receives tactile stimulation, the vestibular and proprioceptive systems organize the information. Then the brain either responds to or ignores the sensation. For example, when a person first puts on a heavy winter coat, the difference is noticeable. As the body becomes accustomed to the feeling, the sensation is ignored.

Problems When the tactile system is not fully developed, two problems can occur: a) tactile dysfunction, and b) tactile defensiveness. Tactile dysfunction is a problem in the ability to notice or locate contact to the body. Tactile defensiveness results in an inability to ignore touch and an over-reaction to any contact with the skin.

Tactile Dysfunction A student with tactile dysfunction will have poor body awareness and will unknowingly collide with objects. As with proprioceptive problems, the student will have difficulty with body identification and may not move a body part on command. When asked to raise the right hand, the student may have to touch the hand or use the other hand to aid the movement because a sensory map of the body has not developed.

Tactile Defensiveness Tactile defensiveness causes a student to over-react to touch, and to avoid contact with other people or objects. The vestibular, proprioceptive, and tactile systems are not organizing the sensations, therefore, all touch is perceived as negative. For instance, a tactile defensive student will avoid hugging, wearing tight fitting clothing, standing near another person, or standing in line. Since the student avoids tactile stimulation, tactile dysfunction may also occur from lack of input for sensory mapping.

Movement Characteristics

Tactile Dysfunction

Appears clumsy
Movement not refined
Poor motor planning
Poor locomotor patterns
Poor non-locomotor patterns
Poor manipulative skills
Poor body awareness
Poor spatial awareness
Lack of desire to participate
Poor posture
Inability to adapt body to specific tasks
Messy handwriting

Tactile Defensiveness

Avoids contact with others
Prefers loose-fitting clothing
Removes clothing
Overreacts to contact or touch
Uncomfortable standing in line or near others
Short attention span

Recommended Activities for Tactile System Problems

Tactile Dysfunction	Tactile Defensiveness
Touching various textures	Start with least sensitive body parts --usually distal to proximal
Massage	Self massage
Rolling	Rubbing body parts with various textures
Pressure	Deep pressure activities
Wrapping	Vibration
Blindfolded identification of body parts	Vestibular activities prior to tactile
Clapping/Stomping	

(See Table 4.4 for suggested activities)

Visual Motor Development

Definition The visual system involves the sense of sight. Light rays enter the eyes which stimulate the retina and sends visual sensory input to the brain. The visual motor process occurs when visual impulses are related to other sensory information from the vestibular and proprioceptive systems. Visual motor control is the ability to match visual input with appropriate motor responses.

Development Two types of visual development are necessary for adequate visual motor ability: a) refractive system and b) orthoptic system. The refractive system refers to the ability of the eye to perceive clear and sharp images from the light rays entering the eye organ. Students who have trouble seeing objects far away are myopic or nearsighted. Hyperopia or farsightedness is an inability to see objects at a close range. The level of development in the refractory system is tested and corrected by an optometrist or an opthamologist.

Orthoptic vision depends on the ocular muscles working in unison to follow or fixate on an object. The orthoptic system develops along with the vestibular and proprioceptive systems. The brain receives information about the position of the head and body through the other systems and relates the information to visual input. Now the child will be able to position the body and the eyes to accurately perform visual motor tasks such as following a tossed ball in order to catch it.

Besides following objects, the ocular muscles also develop the ability to stabilize the eyes for fixation. In order for the eyes to fixate, the amount of movement in the muscles must be inhibited. Vestibular and proprioceptive systems give the brain information about the amount of movement in the neck and ocular muscles. Then the brain communicates to the muscles the amount of force necessary to hold the head and eyes still. With adequate visual motor development, the child can fixate his eyes in order to accurately throw a ball at a target.

TABLE 4.4 SUGGESTED ACTIVITIES FOR TACTILE PROBLEMS

Activity	Conditions	Effect on Sensory System
Mirror Activities	While the student looks in a full length mirror, he/she touches and names body parts indicated by the instructor. Next the student names the body part the instructor touches.	Stimulates the tactile system and reinforces the ability to identify body parts touched by visual cues from the mirror.
Direction Change with Mirrors	Student changes direction in relationship to the mirror, such as side, front or back; touches and names body parts indicated by the instructor.	Stimulates the tactile system and reinforces the ability to identify the body parts touched after visual cues from the mirror. Develops tactile perceptions in relationship to directionality.
Blanket Roll-Up	Student does a log roll and wraps him/herself in blanket.	Stimulates the vestibular system while the tight blanket wrap stimulates the tactile receptors.
Balloon Tap	Student keeps a balloon in the air by using various body parts, such as elbow, foot or knee.	Stimulates the tactile receptors through contact with the balloon, and reinforces body part identification.
Blindfolded Block Search	Student attempts to find blocks or other objects scattered on the floor while blindfolded. May be timed to see how many are picked up in a minute, or can race against another student.	Causes the student to use tactile information to find blocks, and also reinforces directionality by using proprioceptive information.
Blindfolded Penny Search	Student attempts to find pennies in a bowl of rice. May be timed to see how many are picked up in a minute, or can race against another student.	Causes the student to use tactile information to find pennies.

Activity	Conditions	Effect on Sensory System
Partner Press	Two students press various body parts together, such as hands, heads, backs, to find a balanced position between them.	Stimulates the tactile receptors in the areas pressed; stimulates the proprioceptive system through cocontraction to remain balanced. Also reinforces body part identification.
Human Hamburger	A group of students lie sandwiched between two gym mats. Other students carefully roll over them one at a time. Then have the groups switch.	Stimulates the tactile receptors in the areas pressed; the vestibular system is stimulated in the students who are rolling.
Blindfolded Tactile Obstacle Course	Students are barefooted and blindfolded. One by one they crawl, scoot, walk, roll, etc., over various textures.	Stimulates the tactile receptors in various body parts, and reinforces discrimination of different textures. While walking blindfolded, the vestibular system and equilibrium are improved.
Blindfolded Partner Search	Students are blindfolded and allowed to touch a swatch of a texture (sandpaper, carpet, silk, etc.) which is then pinned on their back. Walking around in the group, they must find the partner with the same texture on the back.	Stimulates the tactile receptors in the body parts as the students bump into one another which reinforces the ability to discriminate where the body has been touched. Also, the tactile system (fingers) must learn to discriminate different textures.
Touching Simon Says	Student must touch, pat, brush, the body part indicated by Simon.	Stimulates the tactile receptors in the body parts touched, and by varying the pressure and timing of touches the system learns to discriminate different kinds of touch.
Changing Clothes Relay Race	Students in teams. One student runs to a pile of clothes and puts on a shirt and pants. Returns to the group, takes off the clothes, the next person puts them on, runs to the pile, takes them off and returns to the line. Repeat through all.	Stimulates the tactile receptors as the clothes are put on and off.

TABLE 4.4 (continued) SUGGESTED ACTIVITIES FOR TACTILE PROBLEMS

Problems Visual problems can range from difficulties in clarity of vision to ocular muscle control. For a child who complains that he cannot see, rubs his eye, or squints, the problem may be in the refractory system. The recommendation should be to have the vision tested by an optometrist or opthamologist. A child who has trouble following or fixating on any object to get accurate visual information may have problems with the orthoptic system and should have his near point vision tested by an optometrist. Movement experiences which combine recommendations from the optometrist or opthamologist with motor development needs can be provided by the physical educator.

Movement Characteristics

Appears clumsy
Avoids climbing
Poor locomotor, non-locomotor, and manipulative patterns
Poor kicking
Poor balance
Lacks desire to participate
Messy hand writing
Turns head when catching
Poor motor planning
Collides with objects
Poor spatial awareness
Lack of refined movement
Unable to locate an object in space
Poor reading ability
Poor directionality

Activities Recommended for Visual System Problems

Tracking
Fixation
The above combined with manipulative coordination
Balance

(See Table 4.5 for suggested activities)

Activity	Conditions	Effect on Sensory System
Balloon Touch	Student supine on a mat with arms abducted. Hang a balloon above eyes, not swinging. The student must touch the balloon with both hands simultaneously. The student must touch with both hands to keep it from swinging.	Initially causes the eyes to fixate on one thing at the student's midline. This should strengthen the ocular muscles. Also, the student must use bilateral coordination of the arms to the midline to avoid swinging the balloon. Builds proprioceptive and cocontraction because the arm movement must be controlled.
Ball on Spoon Balance Relay	Each relay team member must carry a ping pong ball on a spoon to a line and back without dropping the ball. Vary the size of spoon or ball to make task more or less difficult.	The eyes must fixate on the spoon and ball to be successful. The ocular muscles and the neck muscles are strengthened for stabilizing the head. Cocontraction reinforces proprioceptive stimulation in the arm which is carrying the spoon and ball.
T-Ball	Student plays softball, but bats the ball off a T-ball apparatus.	The eyes must fixate on the ball for accurate batting of the ball. Proprioceptive system controls the direction and speed of the arms in the swing. Vestibular system relates position of head to body and movement during swing.
Balloon Tap or Bean Bag Toss Standing in a Hoop	Student either keeps balloon in air, or tosses and catches a bean bag while standing in a hoop. The student must see how long he/she remains in the hoop, how long the balloon stays up, or how many times the bean bag is caught.	The eyes must fixate on and move with the ball for accurate tapping or catching. Also, the proprioceptive system and tactile systems are used to maintain enough control to avoid the need to step out of the hoop.
Hit Swinging Balloon or Ball with a Paddle	Student attempts to hit a swinging ball with a paddle and count the successful attempts.	The eyes must track the swinging ball in order to accurately hit it. Also, the proprioceptive system is used to accurately move the hand and arm of the paddle.
Zigzag Ball Chase	Student kicks a ball through a zigzag cone pattern without losing control.	Eyes must track ball for accurate use of feet to maneuver the ball through the cones. Visual information must be related to proprioceptive and tactile information from the feet for control.

TABLE 4.5 SUGGESTED ACTIVITIES FOR VISUAL MOTOR PROBLEMS

TABLE 4.5 (continued) SUGGESTED ACTIVITIES FOR VISUAL MOTOR PROBLEMS

Activity	Conditions	Effect on Sensory System
Follow the Line Tag	Students run along lines on floor to play tag. If a student is tagged or steps off the line, he/she is it.	Eyes must track the lines on the floor to stay on the line. The visual information must be related to balance and proprioceptive information about the feet and the body to maintain enough control to stay on the line.
Jai Alai with Balloons	Students use Jai Alai scoops, or cut out plastic milk bottles to catch and throw balloons.	Because the balloon travels slowly, the eyes have time to track the balloon. The proprioceptive system and cocontraction are used to control the arm used because control is necessary to catch the balloon with a scoop.
Strike a Swinging Ball	Student practices striking a ball which is swinging in front of him/her. Count the number of successful hits.	The eyes must track the ball for success. The visual input must be related to proprioceptive and tactile information for accurate contact with ball.
Ball on Board Relay	Each team member carries a ping pong ball on a flat surface to a line and back without dropping it.	The eyes must track the ball for success. The visual input must be related to proprioceptive and tactile information to control the small movements of the board.
Kick and Stop	Student lightly kicks a ball toward a line, chases it, stops it, and kicks it back to the starting place. The student must keep the ball between two lines 10 feet apart.	The eyes must track the ball for success. The visual input must be related to proprioceptive and tactile information for accurate control of the ball. The vestibular system is also stimulated by the quick stop and start movement.
Mini-tramp Catch	Student jumps with two feet on a mini-tramp and plays catch.	The vestibule is stimulated by the up and down motion. The eyes must focus for tracking the ball. The proprioceptive and tactile systems must be used for accurately positioning the arms and hands to catch.

Primitive Reflexes Integration

Definition Primitive reflexes are innate responses to certain stimulations normally experienced in the first few months after birth. An easily recognizable reflex is the palmer grip in which an infant will grasp anything that touches his palm. In most cases, the primitive reflexes should appear and disappear during the first year of life.

Integration Integration of primitive reflexes occurs as reflexes disappear and equilibrium and righting reactions appear. The muscle control necessary to inhibit the primitive reflexes and to allow equilibrium reactions to happen is important to the development of coordinated movement. As each primitive reflex disappears, the ability to learn new motor skills becomes possible because the student can make new choices about movement. Through each new movement experience, a different set of movement patterns develops. Eventually, the muscles will react automatically to the input from the vestibular, proprioceptive, tactile, visual, and auditory systems.

Problems Unlike the other sensory problems previously discussed, the presence of primitive reflexes beyond the normal age of integration creates motor problems. The immature reflexes elicited by the position of the head and body in relation to gravity inhibit the ability to do more advanced movement patterns.

Movement Characteristics

Low muscle tone
Poor balance
Poor posture
Poor coordination
Poor locomotor, non-locomotor, manipulative patterns
Tires easily
Jerky movements
Lack of desire to participate

Activities Recommended to Integrate Primitive Reflexes

Rolling
Developing torso flexion and extension
Muscle toning exercises
Jumping
Cocontraction

(See Table 4.6 for suggested activities)

TABLE 4.6 SUGGESTED ACTIVITIES FOR INTEGRATION OF PRIMITIVE REFLEXES

Activity	Conditions	Effect on Sensory System
Swinging in the Hammock	Student lies prone or supine in the hammock swing, keeping head up while the instructor swings child around in various directions.	Stimulates the vestibular system and the gravity receptors which causes a righting reaction. The activity also helps integrate the symmetrical tonic neck reflex.
Scooter Board Down the Ramp	Student lies prone on a scooter board and rides down a ramp with both arms extended in attempts to knock down two bowling pins as he passes between them.	Stimulation of the vestibular system elicits the labyrinthine reaction which helps to integrate the symmetrical tonic neck reflex.
Rolling on a Cage or Therapy Ball	Student lies prone on a therapy ball while teacher holds his feet. Student must keep head up and arms extended while maintaining balance on the ball.	Development of the the righting reflexes and equilibrium reactions occurs while integrating the symmetrical tonic neck reflex.
Rope Climbing Curl-Ups	Student lies supine with knees bent, feet flat on the floor, and pulls himself into a curl-up by rope climbing over his stomach.	Integration of the symmetrical tonic relax occurs as tonic muscle tone develops.
Scooter Board Arm Pull or Leg Push	Student lies prone on the scooter board and pulls himself with his arms; or student sits on scooter board and pushes himself with his legs.	Integration of the symmetrical tonic neck occurs as tonic muscle tone develops.
Balloon Touch	Student lies supine on a mat while using arms and legs simultaneously to touch a balloon hanging over the stomach.	Integration of the symmetrical tonic neck reflex occurs as tonic muscle tone develops.

Activity	Conditions	Effect on Sensory System
Alligator Relay	Each student does a cross lateral alligator crawl to the opposite line and back.	Extensor tone is developed by holding the head up, which causes integration of the symmetrical tonic neck reflex. This also encourages cross lateral movement.
Big "X" Roll	Student lies supine on the floor in an "X" position. The student initiates a roll with one hand by crossing the body with the same hand until he rolls over. The exercise is repeated using the other hand and then each foot.	Through segmental rotation of the trunk, body righting develops.
Bean Bag Crawl Relay	Each student holds a bean bag between shoulder and chin, crawls the length of a gym mat, and returns.	Integration of asymmetrical tonic neck reflex occurs through using movement opposing the reflex.
Chin Ball Pass	Each student carries a tennis ball between his chin and neck, walk down to the opposite line and return, and pass the ball on to the next person in line, without using arms.	Integration of asymmetrical tonic neck reflex occurs through using movement opposing the reflex.
Jump and Stoop Tag	Each student jumps around the room; they are "free" if they stoop. "It" may walk fast around the room attempting to tag non-stoopers.	Jumping and stooping helps to integrate the positive and negative supporting reactions.
Jumping and Stopping on the Mini-Tramp	Student jumps on the trampoline and stops with knees bent, on command.	Jumping and stopping helps to integrate the positive supporting reaction.

TABLE 4.6 (continued) SUGGESTED ACTIVIES FOR INTEGRATION OF PRIMITIVE REFLEXES

Auditory System Development

Definition The auditory system is the sense of hearing. Sound waves in the air stimulate the inner ear which sends impulses to the brain. Integration with vestibular and other systems is needed to make sense out of the sounds.

Development The development of the vestibular and auditory systems are closely connected since both types of sensory organs are located in the inner ear. In the brain stem, the major processing centers for auditory input integrate the information with input from the vestibular, proprioceptive, tactile and visual systems. If all systems are organized, then the student will have adequate motor planning ability. Therefore, stimulation of the auditory system can help develop integration of all sensory systems.

Problems When the auditory systems, along with the vestibular, proprioceptive, tactile and visual systems, are inadequately organized, balance, speech and motor ability will be negatively affected. Many other symptoms may be similar to problems arising from poor vestibular integration such as: a) short attention span, b) poor proprioceptive awareness, and c) poor coordination.

Movement Characteristics

Poor balance
Poor motor planning
Poor speech patterns
Poor locomotor, non-locomotor and manipulative development
Lack of desire to participate
Short attention span

Activities Recommended to Integrate the Auditory System

Repeating instructions
Balance
Use music or sounds
Games which include varying instructions

(See Table 4.7 for suggested activities)

TABLE 4.7 SUGGESTED ACTIVITIES FOR AUDITORY PROBLEMS

Activity	Conditions	Effect on Sensory System
Simon Says	Instructor or a student tells the other students a movement to do, but must precede the instruction with "Simon Says." The other students only perform the movement if they hear "Simon Says" first.	The auditory system is used to discriminate the instructions preceded by "Simon Says." The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills.
Start/Stop	Students perform an activity, such as running or jumping, as long as music is playing, and stop when the music stops. Try reversing the activity by stopping when the music plays, and moving when the music is off.	The auditory system is used to discriminate the time the music is on or off. The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills.
Listen, Speak and Do	Instructor tells the student to do a series of 3-5 movements. The student verbally repeats the instruction, then does the movements.	The auditory system is used to hear the instructions and then repeat the words. The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills.
Activity Records	Use an activity record. Vary the volume of the record player. The students must listen carefully as the volume is reduced.	The auditory system is used to hear the instructions and do the activities. By changing the volume, the auditory system must work harder. The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills.
Name Tag	Instructor calls out a student's name. That student becomes "it." The instructor changes the name frequently.	The auditory system is used to listen for their names. By changing the volume of the instructors voice, the students will have to listen carefully and monitor the amount of noise they emit.
Telephone Relay	First person of the relay team runs to a line and back, then whispers a short sentence to the next person who then repeats the sequence. The team that most accurately says the sentence at the end wins.	The auditory system is used to listen for the sentence. They must listen carefully because the requirement for winning is accuracy of the last person repeating the sentence out loud.

TABLE 4.7 (continued) SUGGESTED ACTIVITIES FOR AUDITORY PROBLEMS

Activity	Conditions	Effect on Sensory System
Blindfolded Listen and Count	Blindfolded students listen to the number of bounces of a ball, or claps, or any sound. Then they perform that number of steps, jumps, claps, etc.	The auditory system is used to count the number of sounds. Accuracy depends on careful listening. The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills.
Blindfolded Partner Obstacle Course	One partner verbally tells a blindfolded student how to get through an obstacle course. Walking around cones, rolling on a mat, stepping over a rope, etc., could be activities in the obstacle course.	The auditory system is used to hear the partner. Accuracy depends on careful listening. The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills. The speaking student learns to speak clearly.
Blindfolded Find Your Team	Team members are given a word, such as a color. Blindfolded, the students try to find other team members by saying the word.	The auditory system is used to listen for their team word and discriminate that word from the other team's word. The students will have to listen carefully and monitor the amount of noise they emit.
Listen, Do and Speak	Instructor tells the student to perform a series of movements. After the student does the movements, he/she tells the next student to do the same series.	The auditory system is used to hear the instructions and do the movements. Then the next student must listen carefully. The activity can reinforce body part identification, motor planning, tactile awareness, etc., by using activities which develop these skills.
Partner Do and Tell	One partner goes through an obstacle course while the partner tells him/her what he/she is doing.	As the students perform the activities, auditory reinforcement helps develop the proprioceptive system and body awareness.
Listen and Place the Objects	One partner tells the other how to arrange large paper shapes in a sequence indicated on a small slip of paper.	The auditory system is used to hear the instructions and do the movements. Then the next student must listen carefully. The activity can reinforce directionality.

Appendix A

Assessments of Motor Development

Standardized Motor Tests Used by Adapted Physical Education Teachers

According to Ulrich (1984), the following is a rank order of assessments most often used to access the motor development of students:

Rank	Test
1	Bruininks-Oseretsky Test of Motor Proficiency (1978) American Guidance Service Circle Pines, MN 55014
2	AAHPERD Special Fitness Test AAHPERD Publication Sales 1900 Association Drive Reston, VA 22091
3	Brigance Diagnostic Inventory for Early Development Curriculum Associates, Inc. Woburn, MA 01801
4	Hughes Basic Gross Motor Assessment G.E. Miller Inc. 484 S. Broadway Yonkers, NY 10705
5	Project A.C.T.I.V.E. VEE, Inc. PO Box 2093 Neptune City, NJ 07753
6	Purdue Perceptual Motor Survey - Kephart Columbus, OH - Charles E. Merrill
7	AAHPERD Health Related Fitness Test AAHPERD Publication Sales 1900 Association Drive Reston, VA 22091

8 I CAN Project
J.A. Wessel
Hubbard Scientific Co.
Northbrook, IL 60062

9 Ohio State University
Scale of Intra-Gross Motor Assessment
The Ohio State University Microfilms #76-3485

10 AAHPERD Youth Fitness Test
AAHPERD
Publication Sales
1900 Association Drive
Reston, VA 22901

11 Denver Developmental - Screening Test
W.K. Frankenburg and J.B. Dodds
LADOCA Project
Publishing Foundation, Inc.
East 51st Avenue and Lincoln Street
Denver, CO 80216

Appendix B

Supplemental Resources

Able Bodies
American Alliance for Health, Physical Education, Recreation and Dance
1900 Association Drive
Reston, VA 22091

Adapted Physical Education Academy
c/o American Alliance for Health, Physical Education, Recreation and Dance
1900 Association Drive
Reston, VA 22091

Academic Therapy Publications
200 Commercial Boulevard
Novato, CA 94947

Adapted Sports Association, Inc.
Communications Center
6832 Marlette Road
Marlette, MI 48453

American Alliance for Health, Physical Education, Recreation and Dance
1900 Association Drive
Reston, VA 22091

American Anorexia Nervosa Association
133 Cedar Lane
Teaneck, NJ 07666

American Association on Mental Deficiency
5101 Wisconsin Avenue NW
Washington, DC 20016

American College of Sports Medicine
1440 Monroe Street
Madison, WI 53706

American Corrective Therapy Association
c/o Kirk Hodges
PO Box 485
Boerne, TX 78006

American Dance Guild
1133 Broadway, Room 1427
New York, NY 10010

American Dance Therapy Association
Suite 216-E
1000 Century Plaza
Columbia, MD 21044

American Journal of Physical Medicine
Williams & Wilkins Company
428 E. Preston Street
Baltimore, MD 21202

American Journal of Psychology
University of Illinois Press
54 E. Gregory, Box 5081
Station A
Champaign, IL 61820

American Medical Association
535 N. Dearborn Street
Chicago, IL 60610

Association for Mentally Ill Children
12 W. 12th Street
New York, NY 10003

American Occupational Therapy Assoc., Inc.
600 Executive Boulevard
Rockville, MD 20852

American Physical Therapy Association
1156 15th Street, NW
Washington, DC 20005

American Psychological Association
1200 17th Street, NW
Washington, DC 20036

American Red Cross National Headquarters
17th and D streets, NW
Washington, DC 20006

American Rehabilitation
U.S. Superintendent of Documents
U. S. Government Printing Office
Washington, D.C. 20402

An Association for Children & Adults with Learning Disabilities (ACLD, Incorporated)
Resource Library
4156 Library Road
Pittsburgh, PA 15234

Association for Retarded Citizens
2501 Avenue J
Arlington, TX 76001

Behavioral Disorders
Council for Exceptional Children
CCBD Division
1920 Association Drive
Reston, VA 22091

Boy Scouts of America
Scouting for the Handicapped Division
PO Box 61030

Clearinghouse on the Handicapped
Office of Special Education and Rehab. Svcs.
Room 3106, Switzer Building
Washington, D.C. 20202

California Association for Neurologically Handicapped Children
PO Box 61067
Sacramento, CA 95860

Congress on Research in Dance (CORD)
Dance Dept., Education 675D
New York University
35 West Fourth Street
New York, NY 10003

Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

Dalcroze School of Music
161 East 73rd Street
New York, NY 10021

Dance Horizons
1801 E. 26th Street
Brooklyn, NY 11229

Dance Notation Bureau, Incorporated
8 East 12th Street
New York, NY 10003

Education and Training of the Mentally Retarded Child
Council for Exception Children
1920 Association Drive
Reston, VA 22091

Epilepsy Foundation of America
1828 L Street, NW
Suite 406
Washington, DC 20036

Exceptional Children
Council for Exceptional Children
1920 Association Drive
Reston, VA

Exceptional Education Quarterly
Aspen Systems Corporation
1600 Research Boulevard
Rockville, MD 20850

Exceptional Parent
11700 Commonwealth Ave., 3rd Floor
Boston, MA 02134-4646

Gallaudet College
Office of Demographic Studies
Annual Survey of Hearing Impaired Children & Youth
7th Street and Florida Avenue, NE
Washington, DC 20002

Girl Scouts of the U.S.A.
Scouting for the Handicapped Girl Program
830 Third Avenue & 51st Street
New York, NY 10022

Goodwill Industries of America
9200 Wisconsin Avenue
Washington, D.C. 20014

Handicapped Flyers International
1117 Rising Hill
Escondido, CA 92025

Handicapped Scuba Association
1104 El Prado
San Clemente, CA 92672

Institute for Aerobics Research
12200 Preston Road
Dallas, TX 75230

Institute for the Achievement of Human Potential
8801 Stenton Avenue
Philadelphia, PA 19118

International Sports Organization for the Disabled (ISOD)
Stoke Mandeville Sports Stadium
Harvey Road
Aylesbury, Bucks
England

Joseph P. Kennedy, Jr. Foundation
1350 New York Avenue, NW
Suite 500
Washington, DC 20005

Journal of Applied Behavior Analysis
Department of Human Development
University of Kansas
Lawrence, KS 66045

Journal of Learning Disabilities
101 E. Ontario Street
Chicago, IL 60611

Journal of Physical Education & Recreation
American Alliance for Health, Physical Education, Recreation and Dance
1900 Association Drive
Reston, VA 22091

Journal of Rehabilitation
National Rehabilitation Association
633 S. Washington Street
Alexandria, VA 22314

Journal of Special Education
Grune & Stratton, Inc.
111 Fifth Avenue
New York, NY 10003

Journal of Special Educators of the Mentally Retarded
Box 171
Center Conway, NH 03813

Kids on the Block
1712 Eye Street NW
Suite 1008
Washington, DC 20006

Laban Institute of Movement Studies
Institute of Movement Studies, Inc.
133 West 21 Street
New York, NY 10011

Learning Disability Quarterly
The Division for Children with Learning Disabilities (DCLD)
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

Learning Disabilities Research Institute
164 Rugby Road
Charlottesville, VA 22903

Little People of America
PO Box 633
San Bruno, CA 93901

Mental Retardation
Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402

Minnesota Outward Bound School
Courses for the Handicapped
308 Walker Avenue
South Wayzata, MN 55291

National Association of Sports for Cerebral Palsy (NASCP)
Raphael Bieber
66 East 34th Street
New York, NY 10016

National Center for Health Statistics
Public Health Service, HRA
Rockville, MD 20852

National Center for Law & the Handicapped
PO Box 477
University of Notre Dame
Notre Dame, IN 46556

National Consortium on Physical Education and Recreation for the Handicapped
Seton Hall
University of Kentucky
Lexington, KY 40506

National Council of YMCAs
291 Broadway
New York, NY 10007

National Dance Association
1900 Association Drive
Reston, VA 22091

National Easter Seal Society
2023 W. Ogden Avenue
Chicago, IL 60612

National Handicapped Sports and Recreation Association
4105 East Florida Avenue
Denver, CO 80222

National Handicapped Sports & Recreation Association (NHSRA)
Ron Hernley, President
Capitol Hill Station
PO Box 18664
Denver, CO 80218

National Inservice Network
Indiana University
2853 East Tenth Street/Cottage L
Bloomington, IN 47405

National Mental Health Associaiton
1800 N. Kent Street
Rosslyn, NY 22209

National Rehabilitation Association
1522 K Street NW
Washington, D.C. 20004

Office of Special Education (OSE), formerly Bureau of Educ for the Handicapped (BEH)
400 Maryland Avenue, SW
Donahoe Building
Washington, DC 20202

Palestra
Challenge Publications, LTD
PO Box 508
Macomb, IL 61455

People-to-People Committee for the Handicapped
1522 K Street NW, #1130
Washington, DC 20005

Perceptual and Motor Skills
Box 9229
Missoula, MT 59807

Physical Activities Report
171 Saybrook Industrial Park
Old Saybrook, CT 06475

Physically Impaired Association of Michigan (PIAM)
601 West Maple Street
Lansing, MI 48906

The Physical Educator
Publications Office/Special Population Issues
9030 Log Run Drive N
Indianapolis, IN 46234

Physician and Sports Medicine
McGraw-Hill Publications Co.
1221 Avenue of the Americas
New York, NY 10020

President's Committee on Employment of the Handicapped
1111 20th Street NW
Washington, DC 20036

President's Committee on Mental Retardation
Washington, DC 20201

Psychoanalytic Quarterly
State Department of Mental Hygiene
Hudson River Psychiatric Center
Poughkeepsie, NY 12601

Quebec Assoc. for Children with Learning Disabilities
6338 Victoria Avenue
Montreal 252
Quebec, Canada

Rehabilitation International USA
20 West 40th Street
New York, NY 10018

Rehabilitation Literature
National Easter Seal Society
2023 W. Ogden Avenue
Chicago, IL 60612

Research Quarterly for Exercise and Sport
American Alliance for Health, Physical Education, Recreation and Dance
1900 Association Drive
Reston, VA 22091

Special Olympics Incorporated (SO)
Eunice Kennedy Shriver
1350 New York Avenue NW, Suite 500
Washington, DC 20005

Sportsline
United Association of Sports for Cerebral Palsy (UCP Inc.)
66 E. 34th Street
New York, NY 10016

Teacher Education and Special Education
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

Teaching Exceptional Children
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

U. S. Organization for Disabled Athletes
161 Westfield Circle
Danville, CA 94526

Young Children
Nat'l Assoc. for Education of Young Children
1834 Connecticut Avenue NW
Washington, D.C. 20009

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